







A. Piste, 1822.

PESTALOZZI.

From a miniature given to Rev. C. Mayo, D.D., and now in the possession of Miss Mayo.

PESTALOZZI

AN ACCOUNT OF HIS LIFE AND WORK

BY

Henry
H. HOLMAN

M.A. (CANTAB), FORMERLY PROFESSOR OF EDUCATION IN THE
UNIVERSITY COLLEGE OF WALES, ABERYSTWYTH
AUTHOR OF "An Introduction to Education,"
"English National Education,"
"Oberlin," etc.

*WITH FOUR ILLUSTRATIONS
AND DIAGRAMS IN THE TEXT*

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From
H.H.H.

PREFACE.

“OH, how true it is that the teacher without psychology does his work as badly as an old woman doctoring.” Thus wrote Steinmüller in 1799, in relation to Pestalozzi’s ideas. Pestalozzi said: “I want to psychologise instruction”. There is still some room for a modern Pestalozzi. Meantime much may be gained by a study of Pestalozzi’s attempts to psychologise education. A study of origins is, to a student sufficiently well prepared, a great aid to the fullest grasp of pure theory; for abstract science, so far as it is true, must proceed from and return to its simplest forms. To say the least of it, he is very much to be envied or pitied who cannot still learn something from Pestalozzi.

The aim of the present account of the life and work of Pestalozzi is to provide students, and teachers who still study, with the material for a thoughtful survey of the principles and practices of one of the greatest of the world’s pioneer educators and educationists. Every effort has been made to set forth as clearly as possible what Pestalozzi thought, wrote, and did, and not to expound

what the writer of this book thinks of what Pestalozzi thought, and wrote, and did. Of course this does not mean that no opinions are given; but great care has been taken to restrict these as much as possible. The greatest success of this volume will be that it gives the fullest opportunity, and greatest stimulus, to the readers to do their own thinking and formulate their own conclusions.

To this end very full and frequent quotations are made both from translations of Pestalozzi's works, and from the writings of those who knew him best, and were most competent to criticise, favourably and unfavourably, his work. Whilst this should be helpful as an easy introduction to a general view of the man and his work, it is hoped that it will also lead the reader to the original sources, or their translations. Those who have not thus gone to the original sources will be surprised to find how easily and quickly they can read through books for the reading of which the mind has already been well prepared.

This is to cultivate the true student method. Nothing is so mentally degrading as to regard a book as an examination task, and to be grateful to the writer in proportion as he has done all the thinking, and, so to say, tied up the results in well-arranged and plainly labelled parcels, so that they may be easily stored amongst the memory cargo, and readily unpacked when required. To aim at examination success only, or

mainly, is the most certain way of killing intellectual growth and development.

The educational function of a writer is to do for the readers what the wise teacher does for his pupils, *i.e.*, give them the best materials, conditions and opportunities for self-activity and self-development. If this be done, the attitude and the aptitudes of the research student will be fostered, and a scientific grasp result from a scientific method. In this way intelligent readers should obtain from a book with such a topic as this one, some idea of the evolution of educational systems; of the genetic theory of thought itself; and some sense of historical perspective—which will teach a proper modesty in estimating the progress of our own times. To realise how much of the present consists of the past, and how much more of truth and strength than of error and weakness there was in the great men of old, will reveal to us unexpected treasures of knowledge and inspiration.

So far as the present writer has, by selection, given a particular tone and colouring to his view of his hero, he has deliberately chosen to make it as appreciative as possible. He has sought to include everything concerning the man which, he believes, has done, and will do, good to the world at large; and rigorously to exclude all that is foreign to this purpose. He holds the view that all that is good should live after a man, and all that is not so should be decently buried with his bones

—except in so far as the pathologist of men and manners can make a proper and profitable use of it. In particular it is the educational good which it is desired to propound and perpetuate. Pestalozzi was, educationally, one of the world's greatest benefactors.

My special thanks are due to Miss Mayo, of Riverdale, Dorking, for her generous and valuable help in allowing me to make use of Dr. Mayo's literary remains; and for having copies made of the original pictures of which reproductions are given in this book. I am also indebted to Rev. Canon C. H. Mayo, of Long Burton Vicarage, Sherborne, for information gleaned from his *Genealogical Account of the Mayo and Elton Families*.

H. HOLMAN.

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CHAPTER I.

THE SPIRIT OF THE TIMES.

GIVEN a certain native genius of mind and character, it is true of most of the world's great men that they are as much the product of their own and previous times as they are the reformers of their own age, and the formers of some of the elements of all subsequent ages. It is, therefore, necessary to know something of the spirit of the times in which a man lived if we are to know, fully and truly, what he was and what he did. It has been well said that a proverb is the wisdom of all ages wittily expressed—world wisdom crystallised by individual wit. In much the same way it is true to say that the wisdom and work of the world's heroes represent the wisdom and work of all men articulated and universalised by a great master-man. Not every one, however, can make proverbs, nor can every one discover and reveal foundation principles. It needs at least a flash of genius for the one and a man of genius for the other. We can get only as we give ; and he who sees the world's secrets is he who has the large vision and the great soul. All are called but few are chosen : all come under the influences, but only the finely tempered mind and man is in "sympathetic vibration" with them. From him rings out the new note of revelation ; and happy is the world if it hearkens thereto.

The master-mind is not the only star in a particular intellectual firmament, but it is at least one of the suns therein. The real founder of theories and institutions is not necessarily the first or the only one who has thought and acted in such matters, but he who gathers up and puts into clear and potent form great truths : he who universalises what has hitherto been individual and special : he who gives to all what would otherwise have been only for the few : he who completes, in the large sense, what others only began. The great man can no more exist without the help of smaller men, than smaller men can become greater without the help of the great man. How much each owes to the other it is useless to discuss and impossible to determine : we might as well ask whether the product ab is the more indebted to the factor a or b . It is sufficient to remember that neither can do without the other, nor can either do the work of the other.

In trying to set forth the relations of Pestalozzi and his work to the spirit of the age in which he lived, we shall take it as true that every great popular movement in favour of educational progress has been chiefly based on political and social grounds. It has ever been the general aim to consider how to make a man a good citizen rather than a good man ; though, of course, the latter effect could never be wholly ignored, and has always been most clearly recognised by the clearest thinkers and the best intentioned workers. Nevertheless, one is inclined to say that, as a rule, educational progress has been the result of the slow growth of a conviction that it pays better to have men rather than beasts of burden as citizens. The movement towards the social and intellectual emancipation of " the lower

orders" has always received its most powerful stimulus from the efforts of the great thinkers and philanthropists of their times, and from the consequences of the intolerable sufferings and oppressions heaped upon the victims of ignorance and greed, *i.e.*, "the lower orders"—which they in fact were, thanks to the treatment they received.

It is a happy dispensation that in the nature of things the struggles—in their own interests only, in the first instance—for progress of those at the top of the social scale inevitably bring, in the long run, great good to those at the bottom. The growth of political power (in modern times), and with it the increase of educational and social advantages, has been downwards from kings to the aristocracy; the aristocracy to the middle classes; middle classes to the democracy. During the life of Pestalozzi one of the greatest political and social revolutions in European history reached its climax. Professor H. Morse Stephens writing on the period 1789-1815 entitles his book *Revolutionary Europe*. This revolution was really the outcome of an intellectual revolution.

With the revival of learning (1453)—the Renaissance—there had come what may be called the democracy of ideas. Learning was no longer the monopoly of a class, but was open to all who had sufficient ability, leisure and means. And there was such a high and noble enthusiasm for "knowledge for its own sake" that we find the more generous souls desired that all, even the poorest, should partake of it. Erasmus (1467-1536) wished that the Scriptures should be translated into every language and given to all: "I wish that the weakest woman might read the Gospels and the Epistles

of St. Paul. . . . I long for the day when the husbandman shall sing portions of them to himself as he follows the plough, when the weaver shall hum them to the tune of his shuttle, when the traveller shall while away with their stories the weariness of his journey."

The printing press (1438)—the very *deus ex machina* of intellectual democracy—soon did for knowledge what steam has done for trade: reduced time and distance to their lowest terms in the intellectual commerce of the people. Men no longer had to make long and weary pilgrimages to the homes of learning: knowledge was brought to their very doors. Often with less trouble than was taken, formerly, to teach one pupil by the voice, a teacher now taught thousands by the pen. Little wonder therefore that old things began to pass away and all things to become new. In the cultivation of ideas men discovered themselves, so to say, and were no longer content to be the shadows and echoes of the few in high places. They sought first to deliver themselves from bondage and then to enter into possession of their own. This movement, which in the religious world led to the Reformation, in the political and social world led to the advent of democratic forms of government, and the spread of education.

Hobbes (1588-1679), the great English philosopher, may be said to have started the political revolution from the intellectual standpoint. He had endeavoured to find the rational bases of social and political institutions in *Leviathan*; and, in so doing, had founded a school of thought which was to change the whole order of things political in Europe. The central idea of his political theory was that the State is based upon a

voluntary covenant between those composing it, in which they give up more or less of their individual rights and powers in order to gain the advantages of collective protection and progress. They, therefore, establish a supreme authority; but still keep the power to resume their natural rights, if this authority fails to secure for them what they have a right to expect. Although Hobbes himself entirely believed in, and upheld, the monarchical form of this supreme authority, other great thinkers, such as Hooker, Locke and Sydney, modified and expanded the principle—which was known as that of Social Contract. Locke (1632-1704) in his *Treatise on Civil Government* developed from this principle the theory of constitutional government, based on such grounds as: all men are originally free and equal; all should assist and help each other; all the goods of the earth are common to all, in the first instance; only personal labour can give any right of “private property,” and only in so far as there is “enough and as good left in common for others”.

The principles of liberty of thought, personal freedom and individual responsibility were becoming the commonplaces of philosophy—and even philosophy had become democratised; for just as the great religious reformers insisted that the Bible should be translated into the speech of the people, so philosophers had begun to write in a style which appealed to the average man. Such great thinkers and writers as Voltaire, Montesquieu, Rousseau, Spinoza, Leibnitz, Kant, Hume and others, all contributed, by their writings, to the intellectual revolution in Europe.

All this led to the ever-increasing belief that it was through human reason that the Divine Will and its

laws were expressed ; and, therefore, that man himself was the originator and founder of laws and institutions, and was their master, not their slave. Whilst, during the greater part of the eighteenth century, it was held that government existed for the security and prosperity of the governed, yet it was also held that it could not be, and ought not to be, administered by the people. But this latter notion was being denied ; and the French Revolution was the articulate declaration of the belief in the sovereignty of the people, *i.e.*, government of the people, for the people, and by the people. It must be remembered that, throughout the century, the majority of the peasants of Europe were, in effect, absolute serfs. They were compelled to give so much time to working for their lords that they had to cultivate their own land by moonlight. They were not allowed to leave their villages, or marry, without their lord's consent ; neither could any of them learn a trade without permission. They, therefore, were as the driest of dry tinder to the sparks of the intellectual revolution which fell upon them.

Speaking of the political theories which were then "in the air," Mr. Lecky writes : "The true causes of their mighty influence are to be found in the condition of society. Formerly they had been advocated with a view to special political exigencies, or to a single country, or to a single section of society. For the first time, in the eighteenth century, they penetrated to the masses of the people, stirred them to their lowest depths, and produced an upheaving that was scarcely less general than that of the Reformation" (*Rationalism in Europe*). Thus, though monarchs had never done so much, as during this period, in the way of important civil re-

forms, or been more earnest and zealous in promoting the well-being of the lower classes; yet the people were determined to abide by their own mistakes in self-government, rather than endure their present disabilities and the dangers and risks of personal government—however benevolent.

Such was what may be called the social and political atmosphere in Europe, in general; whilst in Switzerland, in particular, it was at one of its points of greatest intensity. Though there were far more freemen than bondmen amongst the peasants, yet they were obliged to fight for their rights against two great anti-popular influences in government, *viz.*, “Patriciates,” and Guild government “by divine right”. During the latter part of the sixteenth century, and onwards, in certain towns and states “it tacitly became the rule that appointments to positions in the councils should be held for life, or even hereditary; in Lucerne, for instance, the son succeeded the father, and the brother the brother. But when the end could not be attained lawfully, unlawful means, such as bribery, were brought to bear. Thus the burghers separated themselves into a distinct class, with the sole and hereditary right of governing the whole state. The road to government appointment was totally barred to all who were not by birth freemen of the city. . . . A purely aristocratic system was gradually formed, or as it was called (after a like system of Rome) a ‘Patriciate’. In Fribourg, for instance, it was determined in 1627 to exclude all families who were not at that time within the pale of the council from holding any public offices; a ‘secret chamber’ of twenty-four members elected the great and small councils and all government officials, and completed

itself; thus the political rights were limited to only seventy-one families. . . .

“From the end of the fifteenth century it became the rule in Zurich and Bern to consult the peasantry and advise with them upon all important acts of government, such as the declaration of war, the conclusion of peace, alliances, taxes, etc. During the course of the sixteenth century, however, the idea gradually obtained that the authorities wielded the sword of protection and punishment in God’s name, and that the divine law required obedience from subjects in all cases . . . so [they] tried to destroy the influence of the people, more especially after an exclusive ruling faction had arisen within the cities themselves” (Dr. Karl Dändliker, *A Short History of Switzerland*). The result of this was that there were constant revolts of the peasants. Such risings, being of small bodies in different localities, were easily put down and the ring-leaders severely punished. In 1653 the peasants made common cause with one another and rose in rebellion. This was known as the Peasants’ War, and it ended in their complete overthrow.

During the seventeenth century considerable material progress took place. “Outwardly considered, the aristocracy developed an appearance of no inconsiderable prosperity, especially in administration. The general conditions and necessities of the time led to many useful institutions. . . . In Bern, Zurich, Zug, Basel, and even in Soleure, Lucerne, Stanz, etc., public almshouses, hospitals, orphan asylums, improved houses of correction, etc., were established. The governments of Zurich, Bern, Basel and Zug made more extensive provision than formerly for scholastic institutions, scientific col-

lections and libraries, for commerce and industry. . . . The authorities of the various states vied with one another in their efforts to further the material welfare of their subjects, in 'fatherly' fashion; to support them in times of misfortune, of bad harvests, of famine, etc., and to check beggary, pauperism and such-like by numerous mandates. Viewed externally, many parts of Switzerland presented a more cheering appearance than the numerous provinces of other lands, mostly depopulated and devastated by war. . . .

“ Once more for every ray of light there was a shadow; narrow-mindedness and bigotry reigned supreme, in a way which it is now hardly possible to conceive. . . . Higher schools were, indeed, provided, but on the other hand hardly anything was done towards educating the people. The teachers in the popular schools were ignorant artisans, discharged soldiers, or uneducated youths; the education consisted merely in learning mechanically by rote, and without understanding, religious matter out of the catechism and various devotional books. By this means ignorance was systematically cultivated, and the mind of the people was stifled rather than awakened. Intellectual life was entirely under the control of the authorities, secular and religious; it was feared that a liberal education might open the eyes of the people. Writings which displeased the authorities, even innocent poems and popular songs, were unhesitatingly suppressed; everything had to undergo the censorship of severe masters ” (Dr. K. Dändliker).

With the increased opportunities for the education of the middle classes came that progress in ideas which invariably precedes all great popular movements. Albrecht von Haller roused patriotic discontent with

existing conditions, and a longing for better things, with his poems *The Alps*, *The Man of the World*, and *Demoralisation*. Young J. C. Lavater, of Zurich, composed his *Swiss Songs*, in which he calls for unity in the cause of national well-being. The songs soon became the "songs of the people," being sung by men and women, old and young, throughout the country. Salomon Gessner, of Zurich, wrote *Idylls*, which were very popular; and in which he sang the joys of country life. Franz Urs Balthasar, of Lucerne, published (1758) a work called *The Patriotic Dreams of a Confederate of a way to make young again the old Confederation*, in which he urges the founding of a national Swiss institute, in which the children of the aristocrats should be educated in such a way that they would become good citizens and capable politicians. Amongst other subjects, history, politics and military science were to be taught. Professor Bodmer, of Zurich, aroused an interest in literature, amongst scholars and readers, by his publications and controversies with German writers. Societies for artists, musicians, naturalists, farmers, etc.; benefit societies; reading clubs, etc., were formed. Printing presses became common and many books, magazines, newspapers and pamphlets were published. Johann von Müller, of Schaffhausen, published (1780) the first popular history of the Swiss. The country was a meeting place for many of the great men of the day. Voltaire, Ferney and Gibbon spent much time together at Lausanne; whilst Klopstock, Wieland, Kleist, Goethe, Fichte and other great German writers often stayed at Zurich. No wonder that to people suffering so much political and social oppression and repression, and yet just beginning to enter into in-

tellectual liberty and life, the political pamphlets and books (from France and England) which preached the sovereignty of the people, and the liberty of man, met with a hearty welcome. Above all, that famous and epoch-making work by Rousseau, *Contrat Social* (published 1744), had a profound effect upon the reformers. With all its glowing eloquence; its human sympathy; its clear-cut and apparently conclusive arguments; its dogmatic definiteness; and, first and foremost, its fitness as argument—however specious and superficial even as special pleading—for their purpose; this book came as an inspired revelation to the minds of its readers.

As Mr. John Morley says, in his work on Rousseau, in spite of its "shallowness [and] practical mischievousness . . . it was the match which kindled revolutionary fire in generous breasts throughout Europe. . . . His theory made the native land what it had been to the citizens of earlier date, a true centre of existence, round which all the interests of the community, all its pursuits, all its hopes, grouped themselves with entire singleness of convergence, just as a religious faith is the centre of existence to a church." Further, it added to this "the cardinal service of rekindling the fire of patriotism, the rapid deduction from the doctrine of the sovereignty of peoples of the great truth, that a nation with a civilised polity does not consist of an order or a caste, but of the great body of its members, the army of toilers who make the most painful of the sacrifices that are needed for the continuous nutrition of the social organisation. As Condorcet put it, and he drew inspiration partly from the intellectual school of Voltaire, and partly from the social school of Rousseau, all institutions ought to

have for their aim the physical, intellectual and moral amelioration of the poorest and most numerous class. This is the People."

Commencing with a sentence, "Man is born free, and everywhere he is in chains"—which must have thrilled the heart of every reformer—Rousseau professes to prove to demonstration (in the *Contrat Social*) the following principles:—(1) A society, community, or state is the outcome of a social compact by which men, freely and voluntarily, bind themselves to obey "the general will": "Each of us puts his person and all his powers under the sovereign direction of the general will; and we receive every member as an inseparable part of the whole". This is for the purpose of defending and protecting the person and property of each. (2) The body thus formed is the sovereign power—the sovereign and the body politic are one and the same thing. Every member is a *citizen* in that he is a part of the sovereign power, and a *subject* in that he owes obedience to the laws made by, or through, the sovereign power. (3) The sovereign power is inalienable and indivisible, *i.e.*, the sovereign power itself is not subject to the laws it makes; and the sovereign power cannot exercise its legislative functions through one body and its executive powers through another. (4) The general will of the sovereign power in regard to a matter of common interest is expressed in a law. Laws, therefore, cannot be made through any kind of representative institution, since only the sovereign power (the whole community) can possess the law-making power (the general will). (5) All governmental machinery constitutes the agents and go-betweens of the sovereign power as a whole and its members as the parts; to the

end that civil and political freedom for each and all may be properly maintained. The government may be a monarchy, *i.e.*, when there is one magistrate from whom all the rest hold their authority; an aristocracy, *i.e.*, when there are more simple citizens than magistrates; or a democracy, *i.e.*, when there are more citizen magistrates than private citizens. (6) The sovereign power should establish a purely civil profession of religious faith, consisting of a belief in God: a future state: happiness of the righteous and punishment of the wicked: the sanctity of the social contract and the laws.

Such is a brief and bald outline of the theory of the *Contrat Social*, the book which was one of the more immediate causes of the French Revolution, and which had such a powerful influence upon its Swiss readers that, in 1762, the government of Geneva caused a copy of it to be publicly burnt. Pestalozzi has put on record that he was himself greatly influenced by the reading of the book; and his own political writings plainly show this. He, like other good patriots, did everything possible to bring about a better state of things.

The new spirit of national, as against state, patriotism which was fast spreading found active expression in and through the founding, in 1762, of the *Helvetic Society*. This was largely due to the influence of Balthasar's book; and the society consisted of such zealous patriots as Gessner, Hirzel and Iselin. Pestalozzi appears to have been one of the earliest, if not one of the original members. Both Catholics and Protestants worked together in this society. Soon all the most famous men of both French and German Switzerland attended its annual meetings; at which patriotism and national-

ism were fostered : corruption and extortion in public life criticised and exposed ; the moral improvement of individual life urged ; and the reform of education and civic government advocated. The society offered prizes for plans for the improvement of the educational system of the country. It gave active encouragement to Dr. Planta, who had started in 1761 a school, at Haldenstein, on the lines of the Philanthropinists—who sought to carry out Rousseau's principle of things instead of words in teaching—through the sciences which helped most frequently in the affairs of daily life. Dr. Planta also sought to train his pupils in human fraternity, patriotism and religious toleration. Many distinguished men, who took foremost parts in the national reforms, were educated in this school.

Meantime political struggles and revolts continued. In one or two towns and cantons the artisans and peasants succeeded in regaining some of their old rights and privileges ; but in most cases all political agitations and revolts were put down with an iron hand, and many paid for their discontent with their lives. But the people caught the fever of the French Revolution, and, in 1798, the inhabitants of Pays de Vaud rose in rebellion against the authority of the canton of Bern. This rising led to others, and the peasants set to work to overthrow the conditions of feudalism, and declared themselves in favour of "liberty, equality and fraternity". Their leaders appealed to France for aid. This was given, with the result that, in 1798, thirteen states were federated, and put under a representative democracy. The government consisted of two chambers : a senate and a greater council ; the executive was a directory of five members and four ministers ; and

the judiciary was a high court. Lucerne was made the capital.

One of the clauses of the new Helvetic Constitution declared that education was the chief foundation of the public welfare, and in itself of more value than mere wealth. M. Albrecht Stapfer (of Brugg)—a man of enlightened views—was appointed Minister of Arts and Sciences, and at once drew up an admirable scheme for educational reform; he himself holding that "spiritual and intellectual freedom alone makes free". All the cantons were to send him reports on their schools and education, with suggestions for improvement. Federal regulations were drawn up to secure a council of education (seven members) in the chief town of each canton; a commissioner or inspector of schools; and a training college for teachers in each canton. He also provided for the building of grammar-schools; proposed the founding of a Swiss university; arranged for the establishment of a Swiss Society of Arts; did all he could to encourage the formation of literary societies; and endeavoured to preserve, and make public, monastic libraries and collections. He was always the friend of Pestalozzi and did much to help him.

Another man who did much for education at this time was Père Girard (1765-1850) of Fribourg. In 1798 he published a *Scheme for Education for all Helvetia*, which he addressed to M. Stapfer. Seven years later he was appointed as head of the primary school at Fribourg. Here he did a great work, basing his work upon the theory that "the only, the real people's school, is that in which all the elements of study serve for the culture of the soul, and in which the child grows better by the things which he learns and by the manner in which he

learns them". All his school work centred round the teaching of the mother-tongue, through which he taught grammar (through lessons on things), logic, ideas and literature. He set out his system in the *Educative Course in the Mother Tongue*. Girard, like Pestalozzi, was one of the educational reformers.

There was also Emmanuel de Fellenberg (1775-1846), a man of noble birth and exalted character, who, after holding high public offices and mixing much with the people and their rulers, became convinced—through reading Pestalozzi's *Leonard and Gertrude*—that only by improvement in early education could the character of a people be made such that national greatness could be secured. He thereupon consecrated himself and his fortune to education; being then thirty-one years of age. His first step was to undertake the education of his own children, with a few boys from abroad, at his own house, on his estate at Hofwyl. Gradually he increased the number of pupils; but only by twos and threes so that the general working should not be much disturbed. These pupils were all of the patrician class.

Two years later, 1807, he set up a "Poor School" or "Agricultural Institution" for destitute children. The farm-house was used as a school, and Vehrli, the son of a schoolmaster of Thurgovia, was specially trained by Fellenberg (in his own house) to take charge of the institution. The aim was to use agriculture as a means of moral training for the poor; and to make the institution thereby self-supporting. Vehrli left the table of Fellenberg to share the straw beds and vegetable diet of these poor scholars; to be their fellow labourer on the farm; to join with them as a play-fellow in their games; and to be their teacher.

In 1823 a school for poor girls was built in the garden of the mansion ; and Fellenberg's eldest daughter took charge of it. Four years after (1827) another development took place ; an intermediate school, or "Practical Institution," was established. This was for the children of the middle classes in Switzerland. The pupils belonged to the families of men of business, mechanics and professional men ; and they were taught such subjects as were thought necessary for those who were not intended for the professions of law, medicine and theology. Buildings, furniture, diet and dress were such as the pupils had been used to at home. Two hours each day were given to manual labour on the farm ; to gardening on a plot of their own ; to work in the mechanic's shop ; and in household work, such as taking care of rooms, books and tools.

Fellenberg has given his view of the aim of education in these words : "The great object of education is to develop all the faculties of our nature, physical, intellectual and moral, and to endeavour to train and unite them into one harmonious system, which shall form the most perfect character of which the individual is susceptible ; and thus prepare him for every period and every sphere of action to which he may be called".

His work attracted the attention of educators and statesmen in Switzerland and throughout Europe. Pupils were sent to him from Russia, Germany, France and England. Deputations from foreign Governments, and private individuals, visited Hofwyl to study the methods and organisation employed.

Such was the spirit of the times—so far as so brief an outline can suggest it—in which Pestalozzi lived and worked. How far it formed him and how far he

influenced it can be, in some measure, estimated when his life and work have been considered. But we shall understand each better in proportion as we know both.

It is worth while to note what was taking place in other countries, in educational matters, during Pestalozzi's lifetime. Bell (1753-1832), Lancaster (1778-1838), Robert Owen (1771-1858), Samuel Wilderspin (1792-1866) and Miss Edgeworth (1767-1849) were doing their work in Britain; Jacotot (1770-1840), Madame Necker de Saussure (1765-1841), Condorcet (1743-94) were working in France; and Basedow (1723-90), Oberlin (1740-1826) and Froebel (1782-1852) in Germany.

The thought and work of such reformers in education brought about the greatest possible changes in the schools. They may be said to have done for education what Bacon, Descartes, Locke and others did for philosophy: they changed its main purpose from a theological and religious one to an intellectual and rational. For the appeal to authority and tradition was substituted an appeal to science and experiment. Rabelais and Montaigne had done much to prepare the way for Rousseau; whilst Pestalozzi did more than any man before his time to put the best ideas into practical form. In all spheres of thought the principle of following Nature and Reason was beginning to become predominant at this period, and it was applied, for the first time, to education. Men were freeing themselves from the bondage of verbalism and entering into the full freedom of realism, both in thought and action.

CHAPTER II.

EARLY YEARS AND EDUCATION.

JOHN HENRY PESTALOZZI was born at Zurich on the 12th of January, 1746. His father was a doctor, an able man, but one who had not the art, or the will, for achieving practical success in life. He died when Pestalozzi was only six years of age, and left the family in very straitened circumstances. The widow, with her two boys and a girl, was helped by members of the Pestalozzi family, and managed, thanks to this help and the cheapness of the best schooling in Zurich, to give her children a good education. In all her domestic trials and struggles she was most loyally and devotedly supported by a faithful servant named Babeli. When on his deathbed Pestalozzi's father had sent for this girl, in whom he must have had the greatest confidence and trust, and said to her: "Babeli, for the sake of God and mercy, do not leave my wife; when I am dead she will be forlorn, and my children will fall into strange and cruel hands". Babeli replied: "I will not leave your wife when you die; I will remain with her till death, if she has need of me". This promise she fulfilled to the letter.

Not only did she sternly second the mother's strict economies, but she did everything she could to nourish in the mind of her young master that feeling of honest

independence which prevailed in those days almost with the intensity of a passion. On this point she would thus address him: "Never, never has a Pestalozzi eaten the bread of private compassion since Zurich was a city. Submit to any privation rather than dishonour your family. Look at those children (she would say as the poor orphans of Zurich passed the windows), how unfortunate would you be were it not for a tender mother, who denies herself every comfort that you may not become a pauper." She would often keep the children indoors when they wished to go out, saying to them: "Why will you needlessly wear out your shoes and clothes? See how much your mother denies herself in order to be able to give you an education; how for weeks and months she never goes out anywhere, but saves every farthing for your schooling." Their mother was, however, liberal in spending on such things as were needed to keep up their social position; the children had handsome Sunday clothes, but they had to take them off immediately they returned to the house.

The tender, affectionate and self-sacrificing mother, and the faithful and sturdy maid devoted themselves wholly to the good of the children. But this loving devotion was not without its drawbacks for Pestalozzi. As he himself says: "I was brought up by the hand of the best of mothers like a spoilt darling, such that you will not easily find a greater. From one year to another I never left the domestic hearth; in short, all the essential means and inducements to the development of manly vigour, manly experience, manly ways of thinking, and manly exercises were just as much wanting to me as, from the peculiarity and weakness of my temperament, I especially needed them." As one

of his biographers, Dr. Biber, remarks: "The influence which he enjoyed at home operated powerfully upon the growth of his feelings and, in the absence of an equally efficacious cultivation of his intellect, gave to his character that intense energy, uncontrolled by clearness of judgment, which, while it prepared for him many a grievous disappointment in the long course of his philanthropic career, gave also to his soul that unabated elasticity to rise, after every downfall, with renovated strength".

He was first sent to a day-school, then to a grammar-school, where he was kept under the bondage of rigorous discipline and uninteresting tasks, and finally he passed to a college where youths received due preparation for the learned professions. It is not surprising, in view of what we are told of his home training, to find him writing of his early school-days thus: "In all boys' games I was the most clumsy and helpless among all my fellow scholars, and nevertheless, in a certain way, I always wanted to excel the others. This caused some of them very frequently to pass their jokes upon me. One of them gave me the nickname 'Harry Oddity of Foolstown'. Most of them, however, liked my good-natured and obliging disposition, though they knew my general clumsiness and awkwardness, as well as my carelessness and thoughtlessness, in everything that did not particularly interest me.

"Accordingly, although one of the best pupils, I nevertheless committed with incomprehensible thoughtlessness faults of which not even the worst of them was ever guilty. While I generally seized with quickness and accuracy upon the essential matter of the subjects of instruction, I was very generally indifferent and

thoughtless as to the forms in which it was given. At the same time that I was far behind my fellow scholars in some parts of a subject, in other parts of the same subject I often surpassed them in an unusual degree. . . . The *wish* to be acquainted with some branches of knowledge that took hold on my heart and my imagination, even though I neglected the means of acquiring them, was nevertheless enthusiastically alive within me; and, unfortunately, the tone of public instruction in my native town at this period was in a high degree calculated to foster this visionary fancy of taking an active interest in, and believing oneself capable of the practice of things in which one had by no means had sufficient exercise, and this fancy was very prevalent among the youth of my native town generally."

Though he seldom, because of a want of inclination and physical capacity, joined in the games and pursuits of his fellows, yet he did not withdraw himself from his schoolmates in any morose or selfish spirit. He was always frank, kind-hearted and willing to be helpful, though he was the butt for boyish jokes. Indeed, on one occasion at least his courage and comradeship proved superior to that of the others. In the severe earthquake of 1755 the school-house in which he was taught was severely shaken. A panic was caused and the teachers and scholars rushed out of the school, the former "almost over the heads of their boys". After they had recovered from their first terror they wished to obtain the books, hats and other property which they had left behind; but being unwilling to venture into the building they persuaded "Harry Oddity" to undertake the task.

When he was nine years old he began to pay an

annual holiday visit to his grandfather, who was pastor of Hönigg, in the canton of Zurich. These visits lasted for several months each year, and doubtless had some influence in moulding the lad's character and determining his views, for his grandfather was an excellent type of village pastor. He took the closest interest in everything that concerned the welfare of his flock, and more especially in the village school. Pestalozzi would, during his visits, see a good deal of the sufferings of the poor, and of the good which a benevolent and zealous helper could do amongst them. Of his grandfather's school he writes, in his last years: "His school, however defective it might be in point of method, was in living connection with the moral life and the home education of the people, and this combined education cultivated successfully and thoroughly the practice of habits of attention, obedience, industry and effort; in short, laid the fundamental foundations of education" (*Swan's Song*).

Doubtless he would see many other schools in his early years; and they must have influenced his mind very much. One writer thus describes the ordinary Swiss school of those days: "The instruction was generally given in the schoolmaster's only living room, while his family were carrying on their household avocations. In places where there were schoolrooms, they were never large enough to provide sufficient space for all the children to sit down. The rooms were low and dark, and when the door was opened the oppressive fumes of a hot and vitiated atmosphere met the visitor; closely crammed together sat the children, to the ruin of their health, breathing in the foul and heated vapours. The stoves, too, were generally overheated, and the closed

windows were darkened by the steam from the breath of so many human beings; so crowded together were they, that if one wished to leave or return to his place, he must climb over chairs and tables to do so.

“The noise was deafening; the schoolmaster had little authority over his pupils; there was no fixed age at which children were either sent or withdrawn; parents would frequently send them at four or five, and take them away as soon as they could earn any money, generally in their eighth or ninth year. The instruction was bad and irregular. A child who could say the whole catechism through was considered clever, but one who could repeat the 119th Psalm and a few chapters of the Bible by heart, was looked upon as a real marvel. The more that could be said by rote, the greater pleased were the parents” (F. E. Cooke, *Guiding Lights*).

Morf, a biographer of Pestalozzi, collected information about the teachers and schools of Pestalozzi's times. The teachers were very ignorant, often poor working men who kept school to increase their small earnings in other occupations. Of the schools Morf says: “We find hardly any trace of a proper schoolroom. The choice of a teacher often depended, not on his ability, but on his having a room—his family remained in it and carried on their domestic duties during school hours. Often neighbours brought their spinning wheels, finding more warmth and entertainment than at home. . . .

“Reading and learning by heart were the pupils' only tasks. The big ones were learning aloud, so there was a constant hubbub in the school. Class teaching was not thought of.”

Of the way in which schoolmasters were appointed, Krüsi, Pestalozzi's first assistant, gives a very interesting

account. Krüsi, as a lad and when a young man, earned his living by travelling about the country buying and selling small wares. One summer day as he was crossing a mountain, carrying a heavy load of thread, he met M. Gruber, the State Treasurer, and this conversation took place:—

“ ‘It’s very hot, Hermann,’ ” said Krüsi.

“ ‘Yes, very hot.’ ”

“ ‘As Hoerlin, the schoolmaster, is leaving Gais you might perhaps earn your living less laboriously. Would you not like to try for this post?’ ”

“ ‘It is not simply a question of what I would like: a schoolmaster ought to have knowledge of matters of which I am wholly ignorant.’ ”

“ ‘You could easily learn, at your age, all that a schoolmaster there ought to know.’ ”

“ ‘But where and how? I do not see any possibility of this.’ ”

“ ‘If you have any inclination for it, the way can easily be found. Think about it, and do not delay.’ ”

“ Upon this he left me.

“ I considered and reflected, but no light seemed to come to me. However I rapidly descended the mountain hardly feeling the weight of my load.

“ My friend Sonderegger procured a single specimen of writing, done by a skilful penman of Altstätten, and I copied it over a hundred times. This was my only preparation. Nevertheless, I sent in my name, but with little hope of success.

“ There were only two candidates. The chief test consisted in writing out the Lord’s Prayer, which I did with all the care of which I was capable.

“ I had carefully noticed that capitals were used here

and there, but as I was ignorant of the rule I had taken them for ornament. Accordingly I distributed mine in a symmetrical manner, with the result that some came in the very middle of words. As a matter of fact neither of us knew anything.

“When the examination was over, I was sent for and Captain Schæpfer announced to me that the examiners had found us both very weak; that my competitor could read the better, but that I was the better writer; that as I was only eighteen years old, while the other was forty, I should be better able to acquire the necessary knowledge; that, moreover, my room, being bigger than that of the other applicant, was more suitable for a schoolroom; and, in short, I was nominated to the vacant post.” So Krüsi’s room was cleared of some old furniture, and a hundred children were put into it. This was in 1793.

While at college Pestalozzi came under the teaching of men who exercised a great influence upon him, *viz.*, Bodmer, the Professor of History, and Breiting, the Professor of Greek and Hebrew; and he had as his contemporaries Lavater, Iselin, the Eschers and others whose names are connected with the national history of this period. Of the teaching he says: “Independence, freedom, beneficence, self-sacrifice and patriotism were the watchwords of our public education. But the means of attaining all this which was particularly commended to us—mental distinction—was left without solid and sufficient training of the practical ability which is its essential condition.

“We were taught, in a visionary manner, to seek for independence in an abstract acquaintance with truth, without being made to feel strongly what was essentially

necessary to the security both of our inward and of our outward domestic and civil independence. The tone of the instruction which we received led us, with much vivacity and many attractive representations, to be so short-sighted and inconsiderate as to set little value upon, and almost to despise, the external means of wealth, honour and consideration. This was carried to such an extent that we imagined, while we were yet in the condition of boys, that, by a superficial school-acquaintance with the great civil life of Greece and Rome, we could eminently prepare ourselves for the little civil life in one of the Swiss cantons."

During his college course, and when only fifteen years of age, he joined a branch of the *Helvetic Society*, which had been started by Lavater, and had amongst its members such men as Schinz, Füssli and Escher. The aim of these young men was to begin immediate reforms in the territory of Zurich; and to support the down-trodden and poor in their demands for the extension of the rights of the people. The society met weekly, and chiefly occupied itself in debating Rousseau's political ideas. But they by no means confined themselves to talk. They founded a weekly journal called *Der Erin-nerer*, in 1765, wherein they gave publicity to their views; and did not hesitate to attack, in the most frank and fearless manner, public abuses, dishonest and tyrannical officials, worthless ministers, and any person or practice which seemed to them to stand in need of reform.

Pestalozzi, then only nineteen years of age, wrote articles for this magazine. Amongst other ideas he expressed in this paper were the following: "A young man who plays such a small part in his country as I

do, has no right to criticise, or to suggest improvements; at least people tell me this nearly every day of my life. But at any rate I may be allowed to express my wishes . . . that no eminent man may think it beneath his dignity to work with untiring courage for the public good; that no one may look down with contempt on his fellow-creatures of inferior station, if they are really faithful and industrious men . . . that some one may publish a little collection of the principles of education, sound and simple, so that the average townsman, or the average countryman, could understand them; and that some generous individuals would distribute this little book free of charge, or at the price of a half-penny, so that all the clergy both in town and country might circulate and recommend it; and finally, that all parents who read it, might act in accordance with such wise rules of Christian education." The ardent spirits who thus criticised their pastors and masters soon got into trouble. The paper was suppressed; one young theologian had to flee from Zurich; and Pestalozzi was arrested, with several others, and condemned to pay the costs of an action.

Of the actual influence of Rousseau's writings upon himself Pestalozzi says: "The moment Rousseau's *Emile* appeared, my visionary and highly speculative mind was enthusiastically seized by this visionary and highly speculative book. I compared the education which I enjoyed in the corner of my mother's parlour, and also in the school which I frequented, with what Rousseau demanded for the education of his Emilius. The home as well as the public education of the whole world, and of all ranks of society, appeared to me altogether as a crippled thing, which was to find a universal

remedy for its present pitiful condition in Rousseau's lofty ideas. The ideal system of liberty, also, to which Rousseau imparted fresh animation, increased in me the visionary desire for a more extended sphere of activity, in which I might promote the welfare and happiness of the people. Juvenile ideas as to what it was necessary and possible to do in this respect in my native town, induced me to abandon the clerical profession, to which I had formerly leaned, and for which I had been destined, and caused the thought to spring up within me, that it might be possible, by the study of law, to find a career that would be likely to procure for me, sooner or later, the opportunity and means of exerting an active influence on the civil condition of my native town, and even of my native land."

One writer (Henning) says that Pestalozzi once told him that his heart was so filled, in his youth, with enthusiasm for patriotism and zeal for the rights of the oppressed, that he earnestly strove to think out any and every means of deliverance for the poor and down-trodden; and so desperate was he for something effectual to be done, that he might easily have become persuaded that the killing of despots was no murder. Fortunately he was content to try more sensible and successful methods.

No doubt his resolve to forego the ministry was, to some extent at least, due to the fact that on his appearance as a candidate he was unable to say the Lord's Prayer correctly, and broke down three times in his sermon. In his study of law he seems to have followed the characteristic bent of his mind and character, and was more concerned to learn of the principles and methods of good government than the way to win cases.

This is shown by an essay on the constitution of Sparta and a translation of some of Demosthenes' orations, which he published at the time; and which also show his thoroughness in research and his proficiency in classical learning.

The more he got to know of the highest ideals of those principles of freedom and justice which should control individual and national life, the more clearly he saw the shortcomings and evils of the life around him. He saw that the education and training, both at school and in practical life, of those who filled the highest offices—judges, ministers and public officials of all kinds—were quite unsuited to fit them for their work; and that the corruption and fraud which arose chiefly from their incompetence degraded and despoiled the common people. He expressed his views in an essay on the relation which education ought to bear to the various professions and callings. This was published while he was still a student at law.

He appears to have written a good deal on various subjects dealing with law and politics; and he also collected extensive materials for a book on the history of law and politics in Switzerland. Hard and unremitting study, and the mental stress of his intellectual struggles proved too much for his constitution, already impaired by the excessive demands he had made upon it by reason of the zeal and intensity with which he took up and carried out his ideas. Among other things he had thrown himself whole-heartedly into the general enthusiasm of the reformers for the revival of agriculture as a means for the salvation of the poor, and the remedy for all evils. Stirred by the teachings of Bodmer and the writings of Rousseau, many of the best students in

the college learnt farming and practised the simple life. Writing to a friend, in the autumn of 1765, Bodmer says of them: "they have already learned to mow, and to bear heat, perspiration and rain with the peasants".

Pestalozzi is said to have practised vegetarianism; to have slept, unclothed, on the floor of his room; and even to have whipped himself till he bled, to fit himself to undergo any suffering that might be necessary. Little wonder that he became seriously ill, and exhausted in body and mind.

CHAPTER III.

THE BEGINNING OF HIS LIFE-WORK.

ADVISED by his doctor to give up study for a time and to recuperate in the country; and inspired by Rousseau to return to the life of nature; Pestalozzi renounced the study of books for ever, committed all his manuscripts to the flames, and took to farming. He went to Kirchberg, in the canton of Bern, and apprenticed himself to a farmer named Tschiffeli, a man who had a great reputation for his knowledge and skill in farming, and for his keen interest in the welfare of the farm workers. An out-door life, healthy and regular work, the quiet and calm of country life, peaceful meditation, and intercourse with nature and men of simple habits, soon restored him to sound health and to that childlike simplicity of thought and conduct which had distinguished him as a boy. From Tschiffeli he learnt much. "I had come to him," he says, "a political visionary, though with many profound and correct attainments, views and prospects in political matters; and I went away from him just as great an agricultural visionary, though with many enlarged and correct ideas and intentions in regard to agriculture. My stay with him only had this effect: that the gigantic views in relation to my exertions were awakened within me afresh by his agricultural plans, which, though difficult of execution,

and in part impracticable, were bold and extensive ; and that at the same time they caused me, in my thoughtlessness as to the means of carrying them out, to fall into a callousness the consequences of which contributed in a decisive manner to the pecuniary embarrassment into which I was plunged the very first years of my rural life."

In 1767, at the age of twenty-two, he resolved to start a farm for himself. With a small legacy from his father and some capital advanced by a banker in Zurich, he bought about 100 acres of waste land near Birrfeld, in the canton of Argovie, not far from Zurich, and began to cultivate vegetables and madder. He called his place Neuhof, *i.e.*, new farm. Two years later he married Anna Schulthess, a woman beautiful alike in character and person, and one who for fifty years adorned his triumphs as worthily as she bore his misfortunes heroically.

During the year 1770 a son was born to them. This they esteemed the highest possible blessing, and the greatest possible responsibility. Pestalozzi appears to have tried to follow out Rousseau's ideas in the education of his boy, Jacobli ; and he kept a diary of his and the child's progress. Herein we see the first definite beginnings and developments of Pestalozzi's theories of education. A few extracts will show the general character and tendency of his efforts :—

"Jan. 27, 1774.—I drew his attention to some water which ran swiftly down a decline. He was delighted. I walked a little lower down, and he followed me, saying to the water: 'Wait a minute: I shall come back soon'. Shortly afterwards I took him to the bank of the same stream again ; and he exclaimed :

‘Look, the water comes down, too; it runs from up there and goes down and down’. As we followed the course of the stream, I repeated several times to him: ‘Water flows from the top to the bottom of the hill’.

“I told him the names of several animals, saying: ‘The dog, the cat, etc., are animals; but your uncle, John, and Nicholas, are men.’ I then asked him: ‘What is a cow, a sheep, the minister, a goat, your cousin?’ etc. He answered rightly nearly every time, his wrong answers being accompanied by a sort of smile which suggested that he did not intend to answer properly. I think that behind this fun there must be a wish to show his independence of will.

“Feb. 1.—I taught him the Latin names for the various exterior parts of the head. By figures and examples I taught him the meaning of words like inside, outside, below, above, amidst, beside, etc. I showed him how snow turned into water when brought indoors.

“I found that teaching was made easier by changes of the voices, *i.e.*, by speaking now loud, now soft, now on one note and then on another. But to what might this not lead?

“Feb. 2.—I tried to get him to understand the meaning of numbers. At present he knows their names, which he says by heart without attaching any exact meaning to them. To have a knowledge of words with no distinct ideas of the things they stand for immensely increases the difficulty of getting to know the truth. The most ignorant man would have been struck by this fact if he had been present at our lesson. The child had been so used to not associating any difference of meaning with the different names of numbers, that this had produced in him a habit of inattention which

I have not been able to overcome in the slightest degree.

“Why have I been so foolish as to allow him to pronounce these important words without taking care to connect them, at the same time, with a clear idea of their meaning? Would it not have been more natural never to make him say ‘three,’ before he thoroughly knew the number two in all possible examples; is it not in this way that he ought to be taught to count? Ah! how much I have departed from the paths of nature in trying to forestall her teaching. O truths so important for wisdom and virtue! teach me to be upon my guard!

“Allow yourself to be guided by the child’s propensity for imitation. You have a stove in your room: draw it for him. Even if he should not succeed for a whole year in exactly tracing the four corners, at least he will have learned to sit still and to work. The comparison of mathematical figures and magnitudes is, at the same time, a pleasant matter, and an instruction in judgment.

“Again, to have his own garden, and to get together therein all sorts of plants; to collect butterflies and insects, and to make an orderly classification of them, with exactness and perseverance—what a preparation for social life! What a safeguard against idleness and stupidity! And how far all this is from our ordinary teaching which is so little suited to children, who ought to learn first to read the book of nature!

“Feb. 14.—To-day I am satisfied: he learnt willingly. I have played with him: I have been horseman, butcher, everything he wished.

“I drew some straight lines for him to copy. Füssli, the painter, said to me: All that you do should be done

thoroughly ; do not pass from *a* to *b*, until *a* is perfectly known, and so with all. Be in no haste to advance, but stay at the first step until that is thoroughly well done ; thus you will avoid confusion and waste. That all should be complete, that all should be in order, not the least bit of confusion—think how important !

“Since it is nature that gives us our first language : is she not able to give us ten languages in the same manner ? I perceive that I am not following closely enough the course of nature in the teaching of language. It is necessary that I should further accustom myself always to speak Latin.

“Feb. 15.—Lead your child by the hand to the great scenes of nature ; teach him on the mountain and in the valley. There he will listen better to your teaching ; the liberty will give him greater force to surmount difficulties. But in these hours of liberty it should be nature that teaches rather than you. Do not allow yourself to prevail for the pleasure of success in your teaching ; or to desire in the least to proceed when nature diverts him ; do not take away in the least the pleasure which she offers him. Let him completely realise that it is nature that teaches, and that you, with your art, do nothing more than walk quietly at her side. When he hears a bird warble, or an insect hum on a leaf, then cease your talk ; the bird and the insect are teaching ; your business is then to be silent.

“But in the few hours of study when steady work is necessary to acquire necessary knowledge, no interruption should be allowed. These hours ought to be few in number, but nothing should be permitted to interrupt them. In this matter it is absolutely necessary to go contrary to the natural bent for liberty.

“Nothing produces such bitter feeling as the punishment of ignorance as a fault. In punishing an innocent child we lose our hold on the heart. We must not suppose that a child knows of himself what is harmful and what in our eyes is serious.

“Plenty of joy and liberty and only a few occasions when the child is obliged to fight against and overcome his natural desires, will give strength and courage to endure. Too much restraint lowers courage, and the times of joy which take its place will fail of their happy influence. The strongest and most frequent impressions are those which determine character, for they dominate the others. Because of this it is possible to correct defects by education.

“Feb. 16 and 17.—I have taught him to hold the pencil. Though this be but a very small matter, I will not permit him in future to hold it badly, in a single instance.”

“Feb. 19.—Liberty is a good thing; and obedience is equally so. We should re-unite what Rousseau has separated. Impressed by the evils of an unwise constraint that only tends to degrade humanity he has not remembered the limits of liberty.

“Let us make use of the wisdom of his principles.

“Master! be persuaded of the excellence of liberty. Do not allow vanity to lead you astray and cause you to seek to produce, by your efforts, premature fruits; let your child be as free as possible; seek diligently for every means of leaving him free, tranquil and good-humoured. Teach him everything, absolutely everything, that is possible through the realities of the very nature of things; teach him nothing through words. Leave him to himself to see, to hear, to find out, to

stumble, to recover, and to make mistakes. No words when action, when doing a thing for himself, is possible ! What he can do for himself, let him do it ; so that he may always be occupied, always active, and that the time during which he is left to himself may be much the greater part of his childhood. You should recognise that nature teaches better than men. . . .

“ He must trust you. If he frequently asks for something you do not think good, tell him what the consequences will be, and leave him his liberty ; but arrange it so that the consequences shall be impressive. Always show him the right way ; if he departs from it, and falls into the mire, pull him out of it. Thus he will find himself in very disagreeable positions through not having profited by your warnings, and through having enjoyed complete liberty. In this way his trust in you will be such that he will not feel hurt when you are obliged to restrain his liberty by a prohibition. It is necessary for him to be obedient to a wise master or the father who gives good advice ; but only in cases of necessity ought the master to prescribe things.”

In these reflections we may clearly see the definite beginnings of his ideas on :—things before words ; following nature ; observation and nature study ; self-activity and thoroughness ; language teaching ; number teaching ; character training ; and orderly development.

While he was thus trying to fulfil the duties of the parent-educator, and perhaps in some measure because of this, his worldly affairs were going from bad to worse. Bad soil, a faithless steward, and lack of practical ability brought matters to a crisis. The banker who had advanced capital to Pestalozzi withdrew it. However the relatives of Pestalozzi's wife came to the rescue,

and he was enabled to carry on his farm; and also to try to improve matters by doing a little in the way of weaving and spinning cotton. But in spite of all his endeavours matters continued to go wrong.

But his own troubles only served to make him think more about the sufferings of others. He asked himself what had become of all his thoughts about improving the lot of the poor. How was such work to be done? He had now obtained actual knowledge of the life and habits of the peasantry, and had made up his mind that reform and progress must come, first and foremost, from within an individual rather than from without, and from the young rather than from their elders. He resolved, therefore, to begin with the most destitute and degraded children; to educate them, in the first place, through their feelings, their ordinary work, and domestic life: and to aim at making them self-respecting and self-dependent. His wife entirely agreed with him.

At this period it was a common practice to hand over orphans or foundlings to the care of farmers and peasants, who, ignorant and selfish, cared for nothing except getting all the profit they could out of the arrangement. The children were made to work very hard; received no, or bad, education; and were often forced to become common beggars, for the advantage of their degraded guardians. Here was work meet for him; and he resolved to get together such waifs and castaways and give them an industrial, moral and intellectual education. The children were to do something towards earning their keep by working in his spinning-mill. His aim was "to call forth, and put into action, the power every human being possesses of satisfying his needs and doing his duty in his state of life". His ideas were

approved by, and he received every encouragement and help from, his friends Pastor Schinz (of Zurich), Lavater, Füssli, Iselin (registrar of Basle), and other influential persons.

Of this purpose of theirs he says: "My wife had much to suffer because of our position; nevertheless nothing could shake, either in her or in me, the intention to consecrate our time, our strength, and the remainder of our fortune to the simplification of the instruction and the domestic education of the people" (*Swan Song*). So, during the winter of 1774-75 they began their work. Pestalozzi received at his house some children whom he gathered together from the neighbourhood: little mendicants whom he found in the villages and on the roads. He clothed and fed them, and cared for them with a father's affection. He had them always with him, and let them take part in all his work in the garden, on the farm, and in the house. In bad weather they were occupied in spinning cotton in a large room which formed one floor of his farmhouse. Only a very short time was devoted to lessons, and often the instruction was given whilst the children were working with their hands. He did not make haste to teach them to read and to write, being persuaded that this talent was of no use until they knew how to talk. But he unceasingly occupied them in the exercise of language, concerning subjects which were furnished by their own life, and he made them repeat passages from the Bible until they knew them by heart.

He finally had about twenty children. These made great progress both in manual and mental work, and developed most satisfactorily in morals and in health. Many more were anxious to share in the advantages

which were offered; but Pestalozzi had already more than his means allowed, though eagerly anxious to take in others. The experiment attracted general attention, and was highly approved and admired. Subscriptions were offered him, and he was advised to make a public appeal for support.

So Pestalozzi drew up, in 1776, an "*Appeal to the friends and benefactors of humanity* who may be willing to support an institution designed to provide education and work for poor country children". After describing how he had already proved the practicability and success of reforming both the minds and morals of destitute and degraded children, he gives the following undertaking, provided that sufficient money is advanced to him: "The money will be paid back in ten years. . . . The number of children admitted shall be according to the financial support given to me. I promise to teach all the children to read, write and calculate. I promise to initiate all the boys, so far as my knowledge and position permit me, in all the practical processes of small farming. I understand the means of cultivation which will, from a small area of land, yield the most abundant products. I promise to teach them how to lay down artificial grass-land; to look after and develop the fattening of cattle; to know by extensive experiments the different grasses and the importance of their proper mixings; the nature and the use of marl; the effects, still disputed, of the repeated use of lime; the management of fruit trees, and, perhaps, of a few forest trees.

"All this will arise out of the position and needs of my estate, so that such efforts will always be work connected with the needs of the house, and not in the least a study which necessitates unproductive outlay.

It will also be the household needs which will furnish the young girls opportunity to learn gardening, domestic work and needle-work. The principal occupation in bad weather will be the spinning of fine cotton.

“ I promise to give them religious instruction, considered as a matter of conscience, and to do all that in me lies to develop in them a pure and tender heart.”

He goes on to point out that the most gratifying success has attended his experiment with the twenty children he has already with him; and states that he will be personally responsible for all future charges connected with them. He undertakes to make an annual report of his work to the subscribers, and asks that the work shall be inspected, and no money given to him unless he carries out his promises. After mentioning the names of well-known men who are supporting him, he makes a final appeal for the confidence and support of all “ friends of humanity ”.

The response to this appeal was, on the whole, satisfactory—the Council of Commerce of the Bern Republic promised to help—and Pestalozzi was enabled to go on with his work. In accordance with his promise to give his patrons a full account of his work Pestalozzi wrote letters to the *Ephemerides*. In these he sets forth his views as best way of reforming the working classes, through the education of their children in establishments which combine agriculture and manufacture for their training. He holds that such institutions will be self-supporting, because of the earnings of the children.

He says: “ It is possible to improve their growth, strength and health by a very simple and economical diet; for their nourishment consists [at Neuhof] almost

entirely of vegetables, though their work is most constant and diligent. Nevertheless they are robust: the strongest go about in the open bareheaded and without shoes or stockings (Jacobli, the only son of the director, is not treated differently). It is possible, in a short time, to make them reasonably skilful in their work, and at the same time to lead them to acquire such school knowledge as is suitable to their position." Even the weakest and most feeble-minded may be redeemed, if the director be a true father in his relations to the children—but no other way will do—the children be kept from the influence of their parents: and stay in the institution for five or six years. Pestalozzi found it necessary to have a written agreement with parents as to the conditions of admission, so grossly did they abuse the privileges of the institution.

The Bern Agricultural Society appointed some well-known and competent men to inspect the establishment, in 1778, and then issued a report in which they express their full confidence in Pestalozzi and his work. The report was issued as a pamphlet, which contained also an account by Pestalozzi himself, with a detailed description of the thirty-seven pupils. These descriptions give us some idea of the difficulties of the work; *e.g.*, "They [two sisters, aged nineteen and eleven] came to me three years ago, extremely neglected in body and mind; they had spent their lives in begging. We have had indescribable trouble to implant the beginnings of order, truthfulness and industry in them. The degree of brutishness and ignorance in the elder passes all belief, and her idleness is chronic. . . . Henri Vogt, of Mandach, eleven; has been here three years; can weave well: has begun to write: works well at French and

arithmetic : is exact and careful in everything ; but his heart seems to me to be cunning, deceitful, suspicious and greedy ; he has good health. . . . Maria Bæchli, eight ; excessively feeble in intelligence and body. But it will be very very interesting for humanity to see that imbecile children, roughly brought up, who would have had no resource except the madhouse, may be, by affectionate attentions appropriate to their feebleness, saved from this misery, and enabled to secure a modest livelihood and an independent life. . . . Henri Fuchsli, of Brugg, seven ; has only been here a few weeks ; seems gifted."

The staff is thus described by Pestalozzi : " For the conduct of the establishment and in the interests of the children, I get the most valuable assistance from Mlle. Madelon Spindler, of Strasbourg, who possesses extraordinary ability and astonishing activity. I have, besides, a master for weaving, and two experienced weavers ; a mistress for spinning, and two young women spinners ; a man who with the work of winding combines the teaching of elementary reading, as well as two menials and two women-servants almost wholly occupied in farm-work."

In spite of all his hopes and efforts Pestalozzi's unpractical nature again betrayed him, and financial difficulties once more assailed him. He tried to find a remedy for this by considerably increasing the number of children ; but this only increased the evil. Parents who were themselves common beggars complained most bitterly against him, and persuaded their children to run away—so that they might enjoy the earnings that the training and skill they got from Pestalozzi would enable them to obtain—but not before they had got a

new suit of clothes at the institution. Untrue and unfair reports were circulated, came to the ears of subscribers, and led to the falling off of subscriptions. And all this whilst Pestalozzi continued to admit children who arrived covered with rags and vermin, whom he made clean and comfortable; he himself partaking of the same kind of food as they had, except that he gave them the best potatoes whilst keeping the worst for himself.

“Every Sunday,” he says, “my house was filled with parents, who finding that the position of their children did not answer to their expectations, and as though to encourage them in their discontent, treated me with all the arrogance which a horde of brutish mendicants can allow themselves in an establishment which enjoyed neither official support nor imposing exterior.”

Still Pestalozzi struggled on, battling with ill-health and worse fortune, but nobly encouraged and supported by his faithful wife. When too late he called in the help of able and experienced men. But matters were past mending, and after two years of painful perseverance, when husband and wife had spent their last strength and their last shilling, the end came. The establishment was closed in 1700.

Pestalozzi, though still the owner of house and farm, was, in effect, as poor as the beggars for whom he had beggared himself. Again his friends and relations came to his rescue and kept his home together. But his wife's bad health, and his own exhausted condition, left them incapable of helping themselves, and soon they were without food, fuel, or money, and suffering from cold and want.

Their sad condition called forth an act of heroic de-

votion on the part of a domestic servant, Elizabeth Naef, of Kappel, who knew Pestalozzi through having been in the service of one of his relatives. When she heard of their distress she straightway went to Neuhof and insisted upon succouring them. Pestalozzi tried hard to dissuade her from sharing their sufferings, but she would not be denied. She set the house in order, put the garden straight, cultivated a small plot of land, and by good management and incessant labour kept the wolf from the door. Well might Pestalozzi take her as his model for the noble Gertrude.

Nearly twenty years after he thus wrote of his aims and his work for the children at Neuhof: "The thing was not that they should know what they did not know, but that they should behave as they did not behave. . . . I lived for years together in a circle of more than fifty pauper children; in poverty did I share my bread with them, and lived myself like a pauper, to try if I could teach paupers to live as men. The plan which I had formed for their education embraced agriculture, manufacture and commerce. In no one of the three departments did I possess any practical ability for the management of details, nor was my mind cast to keep up persevering attention to little things; and in an isolated position, with limited means, I was unable to procure such assistance as might have made up for my own deficiencies. In a short time I was surrounded with embarrassments and saw the great object of my wishes defeated. In the struggle, however, in which this attempt involved me, I had learned a vast deal of truth, and I was never more fully convinced of the importance of my views and plans than at the moment when they seemed to be for ever set at rest by a total failure. . . .

Before I was aware of it I was deeply involved in debt, and the greater part of my dear wife's property and expectations had in an instant, as it were, gone up in smoke. . . .

“Difficulties might gradually have been more or less overcome if I had not sought to carry out my experiment on a scale that was quite disproportioned to my strength, and had I not with almost incredible thoughtlessness wanted to convert it, in the very beginning, into an undertaking which presupposed a thorough knowledge of manufactures, men and business, in which I was deficient in the same proportion as they were rendered necessary to me by the direction which I now gave to my undertaking.

“I, who so much disapproved of hurrying to the higher stages of instruction before a thorough foundation had been laid in the elementary steps of the lower stages, and looked upon it as the fundamental error in the education of the day, and who also believed that I was myself endeavouring with all my might to counteract it in my plan of education, allowed myself to be carried away by illusions of the greater remunerativeness of the higher branches of industry, without knowing even remotely either them or the means of learning and introducing them, and to commit the very faults in teaching my school-children spinning and weaving. . . . I wanted to have the finest thread spun before my children had gained any steadiness or sureness of hand in spinning even the coarser kinds, and, in like manner, to make muslin fabrics before my weavers had acquired sufficient steadiness and readiness in the weaving of common cotton goods.”

But there was no “total failure” in the matter, for over a hundred children had been rescued from ignorance

and poverty and degradation; and Pestalozzi rightly claimed that: "I have proved that children after having lost health, strength and courage in a life of idleness and mendicity have, when once set to regular work, quickly recovered their health and spirits and grown rapidly. I have found that when taken out of their abject condition they soon became kindly, trustful and sympathetic; that even the most degraded of them are touched by kindness, and that the eyes of the child who has been steeped in misery grow bright with pleasure and surprise when, after years of hardship, he sees a gentle friendly hand stretched out to help him; and I am convinced that when a child's heart has been touched the consequences will be great for his development and entire moral character. . . . It gives me indescribable pleasure to see young children, boys and girls, formerly miserable little creatures, grow and develop, to see contentment depicted on their faces, to teach their hands to work, to raise their souls to their Creator, to see the tears of innocence in prayer shine in the eyes of beloved children, and to discern the glimmering of hope, of sentiments, and morals, worthy of the young, in a degraded and abandoned race. It is joy and happiness beyond description to see human beings, the image of their Almighty Creator, grow up in so many forms and with such different gifts, and then perhaps to discover, where no one expected it, in the miserable and abandoned son of the poorest artisan, a great spirit, a genius to be saved."

Now followed evil days for Pestalozzi. His land was let to satisfy his creditors, though he was allowed to remain in the house. "His situation was frightful. Frequently in his only too elegant country house he

wanted money, bread and fuel to protect himself against hunger and cold. His faithful wife, who had pledged nearly the whole of her property for him, fell into a severe and tedious illness" (Raumer). Added to this was the open contempt of his neighbours, whose previous feelings of unbounded confidence, he tells us, "changed into a totally blind abandonment of even the last shadow of respect for my endeavours, and of belief in my fitness for the accomplishment of any part of them. . . . My friends now only loved me without hope; in the whole circuit of the surrounding district it was everywhere said that I was a lost man, that nothing more could be done for me."

CHAPTER IV.

PESTALOZZI AS A LITERARY MAN—"THE VOICE OF ONE CRYING IN THE WILDERNESS."

OF the next eighteen years of his life, immediately following the closing of the Neuhof Poor School, one of his biographers (Dr. Biber) writes: "After the breaking up of that institution we find Pestalozzi in a condition truly deplorable. Dunned by his creditors, reviled by his enemies, insulted by men in power, sneered at by the vulgar, treated with ingratitude by most of those whom he had served, and separated from the few that might have been grateful, destitute of all assistance, but overwhelmed with mortifying advice, cast down by a succession of misfortunes, and tormented by a consciousness of having contributed to them by his own failings, he consumed his days in painful desolation on the same spot which he had made the dwelling-place of love and mercy, but which had now become to him an abode of anxiety and sorrow. He had deprived his wife, with her only son, of those enjoyments and advantages to which her education and circumstances had given her a claim; and he had not even to offer her, in compensation, the tranquil comforts of retirement.

"He was riveted with his family to a ruined and disordered economy, which, at every step, brought

painful recollections and anxious prospects before his mind. Of the cause which lay nearest his heart he durst not speak, even in a whisper; a sarcastic hint as to the success of his undertaking would have been the answer. He was obliged to conceal from mankind the love he bore them, and to take it for tender compassion on their part if they considered him no worse than a lunatic."

Another writer has well said: "Eighteen years!—what a time for a soul like his to wait! History lightly passes over such a period. Ten, twenty, thirty years—it makes but a cipher difference if nothing great happens in them. But with what agony must he have seen day after day, year after year gliding by, who in his fervent soul longed to labour for the good of mankind and yet looked in vain for the opportunity!" (Palmer).

Not in vain, however, was this time of tribulation. Like John the Baptist of old he was preparing his message for the world. In deep communings with his own heart and mind, such as all great souls seem to undergo, he still worked out his plan of salvation for the common people. His noble ideals were but chastened and clarified by the waters of affliction. Experience taught him but did not pervert him. He believed more firmly than ever in his ideals because he saw more clearly and fully their need and truth. He says: "Even while I was the sport of men who condemned me I never lost sight for a moment of the object I had in view, which was the removal of the causes of the misery that I saw on all sides of me. My strength too kept on increasing, and my own misfortunes taught me valuable truths. I knew the people as

on one else did. What deceived no one else always deceived me, but what deceived everybody else deceived me no longer. . . . My own sufferings have enabled me to understand the sufferings of the people and their causes as no man without suffering can understand them. I suffered what the people suffered and saw them as no one else saw them; and strange as it may seem, I was never more profoundly convinced of the fundamental truths on which I had based my undertaking than when I saw that I had failed."

Not all his friends failed him in his sorest need. His old college friend Iselin, who was now editor of *Ephemerides*, invited him, in 1780, to contribute to it, and Pestalozzi did so in the form of a series of aphorisms on life and education, under the title of *The evening hour of a hermit*. The style and purpose of his work may be judged from the following quotations:—

"Pastors and teachers of the nations, know you man; is it with you a matter of conscience to understand his nature and his destiny?"

"All mankind are in their nature alike, they have but one path of contentment. The natural faculties of each one are to be perfected into pure human wisdom. This general education of man must serve as the foundation to every education of a particular rank.

"The faculties grow by exercise.

"The intellectual powers of children must not be urged on to remote distances before they have acquired strength by exercise in things near them.

"The circle of knowledge commences close round a man and from thence stretches out concentrically.

"Real knowledge must take precedence of word-teaching and mere talk."

Twenty-one years later he was able to say of these reflections: "Iselin's *Ephemerides* bear witness that the dream of my wishes is not more comprehensive now than it was when at that time I sought to realise it".

As has so often been the case with the world's greatest men, the want of bread-and-butter has called forth their very souls into articulate form. Soon the crown and glory of all Pestalozzi's writings was to be produced—*Leonard and Gertrude, a Book for the People*. It happened that in 1781 the town's watchmen were to be put into uniform, and this caused a good deal of discussion. One important outcome of this can best be given in Pestalozzi's own words: "In a playful moment I put together a short composition turning this innovation into ridicule, which happened to be lying on Füssli's [a friendly bookseller] table when he was talking with his brother the painter (who, as far as I know, is now living in London where he is held in great esteem) about my sad fate, and lamenting that he knew of no means of helping me out of my present situation, considering the sort of man I was, and the manner in which I acted. Just at this instant the painter took up the squib upon the transformation of the crooked, dusty and uncombed town-watchmen under our gates, into straight, combed and trim ones, read it through several times, and then said to his brother: 'This man can help himself to any extent he pleases; he has talent for writing in a style which at the time in which we live will most certainly excite interest; encourage him to do so, and tell him from me, that he can most certainly help himself as an author, if he only will'. My friend sent for me on the spot and was overjoyed while he told me this, and added,

‘I cannot conceive at all how it was possible that this should not have struck me’.

“I felt as if he were telling me a dream. In the pressure of events I had so neglected my own improvement that I could scarcely write a line without committing grammatical errors; and in spite of all that Füssli said, I thought myself quite incapable of such work. But necessity which is so often said to be a bad counsellor was now a good one to me. Marmontel’s *Contes moraux* were lying on my table when I came home; I immediately took them up and asked myself the distinct question, whether it might be possible for me to do anything of the kind, and after I had read a few of these tales, and read them again, it appeared to me that, after all, this might not be altogether impossible. I attempted five or six similar little stories, of which all I know is that no one of them pleased me; the last was Leonard and Gertrude, whose history flowed from my pen, I know not how, and developed itself of its own accord, without my having the slightest plan in my head, and even without my thinking of one. In a few weeks the book stood there, without my knowing exactly how I had done it. I felt its value, but only as a man in his sleep feels the value of some piece of good fortune of which he is just dreaming, I scarcely knew that I was awake, and yet a new ray of hope began to dawn upon me, when I thought that it might be possible to better my pecuniary condition, and to make it more supportable to my family. . . .

“He [Recorder Iselin of Basle, whom Pestalozzi consulted] immediately wrote to Decker in Berlin, who paid me a louis d’or per sheet, but promised at the same time that, if the sale of the work should render a second

edition necessary, he would pay me the same again. I was unspeakably satisfied. A louis d'or per sheet was to me much, very much, in the circumstances in which I then was. The book appeared, and excited quite a remarkable degree of interest in my own country and throughout the whole of Germany. Nearly all the journals spoke in its praise, and, what is perhaps still more, nearly all the almanacs became full of it; but the most unexpected thing to me was that, immediately after its appearance, the Agricultural Society of Bern awarded me their great gold medal, with a letter of thanks. Pleased as I was with the medal, and glad as I should have been to keep it, I was nevertheless obliged to part with it in my then situation, and sold it some weeks after for its value in money at a goldsmith's."

In the preface to the first edition he writes: "In that which I here relate, and which I have for the most part seen and heard myself in the course of an active life, I have even taken care not once to add my own opinion to what I saw and heard the people themselves feeling, judging, believing, speaking and attempting". In the preface to the second edition he says that the object of the book was "to bring about a better popular education, based upon the true condition of the people and their natural relations. It was my first word to the heart of the poor and destitute in the land . . . to the mothers in the land, and to the heart which God gave them, to be to theirs what no one on earth can be in their stead."

Briefly the story, so far as it directly concerns education, is as follows: In the village of Bonnal, of which Arner is lord and which is managed by his unprincipled steward Hummel, live Leonard and his wife Gertrude.

Leonard is a man of weak character, easily led into wrong, and has fallen into the power of Hummel, through borrowing money from him. Gertrude is "the angel in the house": the perfect wife and mother, the Good-Samaritan neighbour, and the complete housewife. To rescue her husband from the clutches of the steward Gertrude goes to the castle to see Arner. The result of her visit is that Leonard is commissioned to build a church, and Hummel becomes suspect. Then follows a conflict between the influences for evil and for good in the village; Arner having become, through Gertrude's influence and the force of events, the champion of the good. Though many good deeds are done by Arner nothing really substantial in reform takes place until a spinner named Cotton Meyer suggests to Arner that "after all we can do very little with the people unless the next generation is to have a different training from that our schools furnish. Our schools ought really to stand in the closest connection with the life of the home, instead of, as now, in strong contradiction to it."

Lieutenant Glülphi, a friend and helper of Arner, warmly supports this view. The question then arises: how is such a school to be set up in Bonnal. Cotton Meyer says: "I know a spinning-woman in the village who understands it far better than I". This is Gertrude who trains her own children in her own house. Arner, Glülphi and the pastor visit Gertrude's cottage and watch Gertrude training her children. The result is that Glülphi resolves, "I will be schoolmaster," and obtains Gertrude's promise to help him; all agreeing that the proper education of the young is the only means of reforming the village. Glülphi becomes the village schoolmaster and, after he has overcome great

opposition from the parents and the children, his work is crowned with success and he becomes a power for good in the village. Thus is opened a new era, and from this time forward things go on so well that Bonnal becomes a model village, and a commission is appointed from the ducal court to report on the possibility of a universal application of the principles of government in the village. This commission was constituted on these lines: "to ensure thoroughness there must be among the examiners men skilled in law and finance, merchants, clergymen, Government officials, schoolmasters and physicians, beside women of different ranks and conditions, who shall view the matter with their woman's eyes, and be sure that there is nothing visionary in the background". The examiners, after six days' searching inspection, unanimously recommended that the principles should be applied universally.

There is also a parallel purpose in the book: the setting forth of ways and means of social and economic reform. The terrible evils wrought upon the persons and characters of poor people by tyrannical and unprincipled officials—influenced by greed of gain and unchecked by proper supervision—are exposed with unflinching truth. It is then shown how an intelligent and right-minded man, with power, can thwart the designs of the corrupter and the corrupted, and encourage those who desire to do well, by personal action and wisely planned arrangements. Indolence, theft, and the abuse of charity can be prevented; whilst the love of ease, pleasure and honour can be rightly directed. A proper use of religious services and festivals, and the exposure of superstitions, can be used for the furthering of enlightenment amongst the people.

One of the most powerful influences for good will be found in the union and harmonious action of all classes. A scheme to realise this in Bonnal is outlined:—(1) A school to be organised, the methods in which are to be in harmony with the developing influence of domestic life. (2) The better part of the people of Bonnal to join with those of the castle and the parsonage in obtaining a real and active influence over the various households in the village. (3) A new method of choosing overseers (bailiffs) to be adopted, so that the evil influence of bad overseers might be avoided. Further, the peasants were to have tithe-free land for those of their children who saved eight or ten florins before their twentieth year. Thus developed through education: a share in their local government: and security of property, the people of Bonnal make their place a model village.

The book has many passages of great eloquence, exquisite pathos, manly moralising, sparkling wit, dramatic intensity, riotous humour, fine character sketches, and charming incidents, in spite of its want of plot and great diffuseness.

Whilst the book was widely and eagerly read it failed to convey to the masses Pestalozzi's own moral—that the proper education of the young is the foundation and corner-stone of true reform. Most of those who read the book desired only to be interested and amused, and seemed to think that it showed that all the poverty and depravity among the common people resulted from the dishonesty and greed of village officials; and that it only needed mothers like Gertrude, schoolmasters like Glülphi, and lords like Arner to put such matters right. Pestalozzi realised that his readers missed his point and,

to remedy this, he wrote another book: *Christopher and Eliza, my second book for the people*, in 1782. In a later edition of it he says in the preface: "I made a peasant family read together *Leonard and Gertrude*, and say things about the story of that work, and the persons introduced in it, which I thought might not occur of themselves to everybody's mind". The book consists of thirty dialogues in which Christopher, an intelligent farmer, discusses with his family and head servant the history of Bonnal, chapter by chapter. This also failed of its purpose so far as the poor themselves were concerned. He then continued *Leonard and Gertrude*, in three more volumes which appeared in 1783, 1785 and 1787 respectively.

But those of great minds and large hearts, those in high places who sought the welfare of the many, understood, appreciated and sympathised with the purpose of the book. Henning says that it was translated into Danish; and that the nobles—amongst others the Countess Schimmelman—were so much impressed and influenced by the reading of it that they took steps to improve the condition of the peasantry on their own estates. Count Zinzendorf, the Austrian Minister of Finance, consulted Pestalozzi as to educational legislation based on the ideas set forth in the book.

Perhaps the greatest individual triumph of this work was its influence on Fellenberg, who says: "The book made a deep impression on me, and each time I read it I was more and more convinced of its truth, and it was in a burst of deep feeling caused by the reading of it that I vowed to my mother that I would devote my life to the poor and forsaken children". Thus arose another great Swiss reformer,

On the advice of Iselin, Pestalozzi started a weekly newspaper, called the *Swiss News*, in 1782. In this he strove to make his views more widely known and better understood. His chief purpose was to show how education was the best means for dealing with the deepest elements of the national life, so as to secure its highest welfare and cure its worst diseases. He writes : "Governors and instructors have only to direct the progress of the enlightenments and the enjoyments of the time, with all the power and with all the wisdom they possess, in order that the people may lose nothing that is still good, may thoroughly understand what they ought to do, and willingly do that which brings them a livelihood". Again : "Human morality is nothing more than that which results from the development of the first feelings of love and gratitude which the nursling experiences".

As to the beginnings of education, he writes : "The first development of the child's powers ought to come from his participation in the work of the paternal house ; for this work is, necessarily, that which the father and mother best understand, that which most engages their attention, and that which they are best able to teach". In a very characteristic passage—half rhapsody and half reason—he says, in one number : "Summer day ! teach to this worm who crawls upon the earth that the fruits of life develop in the midst of the fires and storms of our globe ; but that to ripen they need the gentle rains, the glistening dew, and the refreshing rest of night. Teach me, summer day, that man, formed of the dust of the ground, grows and ripens like a plant rooted in the soil."

Essays are given on such subjects as : the abuse of

legal forms for defeating the ends of justice; one law for the rich and another for the poor; the hypocrisy of liberal sentiments among the privileged classes and their indifference to the real sufferings of the poor; domestic economy among the lower classes; the influence of different occupations on the character of the people; the state of the peasantry and of the manufacturing classes; the best interest of landed proprietors; parochial administration; the corruption of high life; the destructive effects of quackery and superstition; the moral improvement of criminals; the defects of charity schools; the duty of society to secure to every individual the means of gaining an honest livelihood; medical police; and so on.

In this periodical he published a series of allegorical tales, under the somewhat fanciful title of *Illustrations to my A B C Book, or to the Elements of my Philosophy*. The deep insight and searching irony—in relation to the political and social conditions in the country (see pp. 3-9)—in them may be seen in the following selections:—

“*The Flame and the Tallow.*”

“‘I am always ashamed to see myself so near to you,’ said the flame to the tallow.

“‘The tallow answered: ‘I thought you were ashamed of losing me, because then you always disappear’.

“‘‘Foolish grease,’ replied the flame, ‘it is true that I shine only so long as I live upon you, but I am ashamed of letting it be known.’”

“*The Oak and the Grass.*”

“‘One morning the grass said to the oak, under whose branches it grew: ‘I should get on much better in the

open than under your shelter'. 'You are very ungrateful,' replied the oak, 'not to acknowledge the blessing, which you enjoy, of being protected from the frost in winter by the leaves from my autumn sheddings, with which I cover you.'

"But the grass answered: 'You deprive me, with your branches, of my share of sun, dew and rain; and with your roots my portion of nourishment from the ground; boast not therefore of the forced benevolence of your foliage, with which you foster your own growth rather than prevent my decay'."

"The Privilege of the Fishes."

"The fishes in a pond complained that they were, more than their neighbours in other ponds, persecuted by the pikes. Thereupon an old pike, who was the judge of the pond, pronounced this sentence: 'That the defendants, to make amends, shall in future permit, every year, two common fishes to become pikes'."

"Equality."

"A dwarf said to a giant: 'We have equal rights!' 'Very true, my good friend; but you cannot walk in my shoes,' replied the giant."

By calling these fables "Illustrations of my A B C," *i.e.*, *Leonard and Gertrude*, Pestalozzi intended to draw attention to the fact that they were yet another attempt to make clear "the elements of my philosophy," *i.e.*, the moral regeneration of the race, through education, as the only means to human happiness.

These writings show very clearly what was the real basis of Pestalozzi's work, *viz.*, national regeneration through education aiming at the highest individual

development ; and how his own mind was developing in his efforts to set forth his new gospel of social salvation. As he once said to Mrs. Niederer: “It is only by ennobling men that we can put an end to the misery and ferment of the people ; and also to the abuses of despotism, whether it be of princes or whether it be of mobs”.

The *Swiss News* lasted for only twelve months, and its value was for posterity rather than for its own times. In its essays, short moral stories, dialogues, fables and verse are enshrined some of the most striking evidences of Pestalozzi’s genius : his originality, depth, fulness and independence of thought—untinged and unhampered by any outside influence whatsoever—being seen at their best.

In 1787 he published the fourth volume of his *Leonard and Gertrude* ; and again took up farming.

In 1797 appeared his *Investigations into the Course of Nature in the Development of the Human Race*. This was an attempt to find a philosophical basis for his views, and was undertaken at the suggestion of the great German philosopher Fichte. The following is a short outline of the plan and purpose of the book. He proposes, at the outset, to answer the following questions :—

“What am I ? what is the human species ?

“What have I done ? what is the human species doing ?

“What has the course of my life, such as it has been, made of me ; and what has the course of life, such as it has been, made of the human species ?

“On what ground do my volition and my opinions rest, and must they rest, under the circumstances in which I am placed ?

“On what ground do the volitions of the human species, and its opinions, rest, and must rest, under the circumstances in which it is placed?”

To find an answer to these questions he reviews the “march of civilisation,” and finds that:—

“By the helplessness of his animal condition man is brought to knowledge.

“Knowledge leads to acquisition, acquisition to possession. Possession leads to the formation of society. Society leads to powers and honours. Powers and honours lead to the relations of rulers and subjects, *i.e.*, relations of nobles and commons to the crown.

“All these relations call for a state of law. The state of law calls for civil liberty. The want of law entails tyranny and slavery.

“Following the course of nature in another direction, I find in myself a certain benevolence, by which acquisition, honour, property and power ennoble my mind, whilst without it all these privileges of my social condition only tend to degrade me more deeply.”

In other words, the race has developed through three great stages, *viz.*, (1) an original, instinctive, innocent, animal state of nature. In this condition man is the creature and the victim of circumstances; “his hands are ever stained with the blood of his brother; like a tiger he defends his den, and roars against his own species; he claims the ends of the earth as his own; and perpetrates whatever he chooses under the sun,” *i.e.*, there are no laws except those of self-preservation and no morals save his own satisfactions. But the hardships of such a life lead him to desire, and then to seek, better conditions. Hence conflict with his fellows is changed for co-operation with them.

Now arises (2) the social state. Co-operation leads to greater achievements and more enjoyments. Speech and knowledge are greatly developed, and thus man the brute becomes man the human. But with this come rights and duties, for we can only get much by giving much. Now, therefore, come powers and honours, for “when hundreds and thousands are gathered together [man] is compelled, in spite of himself, to say to the strong, ‘Be thou my shield’; and to the cunning, ‘Be thou my guide’; and to the rich, ‘Be thou my preserver’”. Such honours and powers are in themselves indispensably connected with the development of our species; and only when abused by unfaithful and criminal persons do they corrupt and degrade the race.

After all, however, “the relation of man to man in the social state is merely animal . . . there is nothing he contemplates less than the service of God and the love due to his neighbour. He enters society with a view to gratify himself, and to enjoy all those things which, to a sensual and animal being, are the indispensable conditions of satisfaction and happiness. The social law is, therefore, not in any wise a moral law, but a mere modification of the animal law.”

Man must, therefore, raise himself out of the social state—or he will ever be liable to, and suffer from, the dangers of it—into (3) the moral state. It is only the moral will—“the force of which he opposes to the force of his nature”—that can save man. He finds within himself an element called benevolence, and a power called love, which will ennoble the very root of benevolence—even though this is essentially animal in its origin. “But there is a danger still of love being lost in my longing for self-gratification; I feel desolate

as an orphan, and I seek to rise beyond the power of imagination, beyond the limits of all research and knowledge that is possible here below, to the fountain-head of my existence, to derive from thence help against the desolation of my being, against all the ills and weaknesses of my nature."

Therefore a man "will fear God in order that the animal instincts of his nature shall not degrade him in his inmost soul. He feels what he can do in this respect, and then he makes what he can do the law of what he ought to do. Subjected to this law, which he imposes upon himself, he is distinguished above all other creatures with which we are acquainted." This is the moral man: the man who desires to be higher, nobler and better than he is, and makes every endeavour to raise himself by working upon his own character. Only when a society is composed of such men can it be a really beneficent, prosperous and happy one.

The animal man is as nature makes him; the social man is the product of the social organisation in which he happens to be; but the moral man is the outcome of his own efforts—he is, in a sense, his own creator. "Morality is quite an individual matter. . . . No man can feel for me that I am. No man can feel for me that I am moral." The religion of the animal man is idolatry, because he is a slave to his senses and the creature of his fears. The religion of social man is deceit, because society fosters ambition, pride and inequality; and man strives, by every means, for place and power—endeavours to get all he can for himself at the expense of others. The religion of the moral man is truth, for this is the foundation of his

life and the only means by which he can carry out the self-improvement for which he lives. A man must possess himself—and this the truly moral man does—before he can really possess anything else. Then is he of real worth to himself, his family and the community, for he is no longer subject to his animal instincts or the prejudices of society.

It is only fair to the reader to point out that the above summary is an attempt to make clear what Pestalozzi seems to have meant. All his critics are agreed that there is much that is wordy and obscure in the work ; but none the less, there is much that is fine in substance and in form. From the rational point of view it suffers seriously from the fact that it is—like Rousseau’s works—speculative and fanciful rather than scientific and exact, but this does not make it either valueless or entirely wrong. That the views set forth in the book really underlaid and influenced Pestalozzi’s methods, is clear from his other writings, and is, perhaps, best shown in his *Letters on Infants’ Education*—one of the simplest, clearest and most interesting of his writings on education, and the last and most neglected of them. His own criticism on the *Investigations* is : “This book is to me only another proof of my lack of ability ; it is simply a diversion of my imaginative faculty, a work relatively weak. . . . No one understands me, and it has been hinted that the whole work has been taken for nonsense.”

But to Pestalozzi all this meant much—he found himself, both intellectually and practically. He says : “I was grey haired, yet still a child, but a child deeply disturbed within himself. Still in all these troublous times I moved forwards to the purpose of my life ; but

my way was more unbalanced and erring than ever. I now sought a path to my end. . . . They [those who despised him] restored me to myself and left me . . . nothing but the word which I spoke in the first days of that overthrow, ' *I will turn schoolmaster* '."

After the publication of the *Investigations* follow ten years of silence so far as concerns Pestalozzi's pen. But meantime great events were happening in Switzerland. The political teaching of Rousseau and others was finding expression in revolutionary reform. Pestalozzi was a democrat of the democrats and used his pen on the side of the people. The national government had been put into the hands of five men, who formed the "Executive Directory". These were only too glad to make use of the services of the author of *Leonard and Gertrude*, and they made him editor of a journal designed to spread the knowledge of revolutionary principles.

The title of the paper was to be the *Popular Swiss News*: it was to be issued once a week; and to be sent free to schoolmasters, clergymen and all Government officials, who received orders to read it and to explain its contents to others. It was an entirely official paper, published by the Directory at the request of the Great Council; and its programme was to inform the people as to the changes of Government: spread general enlightenment: and rally the people to the support of the united Government. The first number appeared on 8th September, 1798.

But Pestalozzi had already offered his services for other work, nearer and dearer to his heart. On 21st May, 1798, he sent this letter to the Minister of Justice:—

“CITIZEN MINISTER,

“Convinced that the country is in urgent need of some improvement in the education and schools of the people, and feeling certain that three or four months’ experience would produce the most important results, I address myself, in the absence of Citizen Minister Stapfer, to Citizen Minister Meyer, to offer through him my services to the country, and to beg him to take the necessary steps with the Directory for the carrying out of my patriotic purposes.

“With republican greeting,

“PESTALOZZI.”

Thus ends another epoch of Pestalozzi’s life ; a period which must have been filled with many an agony of despondency, despair and deprivation, only partly expressed by his statement in a letter to M. Zschokke. “Do you know that I have wanted the bare necessities ? Do you know that until now I have kept out of society, away from church, because I had neither clothes nor money to buy them ? O Zschokke, do you know that I am the laughing-stock of the passers-by because I look like a beggar ? Do you know that ? More than a thousand times I was obliged to go without dinner, and at noon, when even the poorest were seated around a table, I devoured a morsel of bread upon the highway . . . and all this that I might minister to the needs of the poor, by the realisation of my principles.”

Yet, happily, even in these dark times there were bursts of glorious sunshine. His writings had made him, to a certain extent, famous. He visited Germany and became acquainted with Goethe, Wieland, Herder, Fichte and other great men, in 1792 ; and in the same year he

was declared a "Citizen of the French Republic," in company with such men as Bentham, Tom Payne, Wilberforce, Clarkson, Washington, Madison, Klopstock, Kozciusko, etc. Karl von Bonstetten asked Pestalozzi to live with him on his estate in Italian Switzerland; the Austrian Minister of Finance, Count Zinzendorf, wished to have him in his neighbourhood; and the Grand Duke of Tuscany desired to give him an appointment.

CHAPTER V.

STANZ AND BURGDORF—"I WILL TURN SCHOOLMASTER."

ONE of the five Swiss Directors was Le Grand, who had been the friend and helper of Pastor Oberlin in his great educational work in the Ban de la Roche, and he was only too pleased to take Pestalozzi at his word. Arrangements were being made for Pestalozzi to open a school in the canton of Argovie when war put an end to the project. But though the war closed one opening it created another. On the 9th of September, 1798, the town of Stanz was burnt by the French, and the people put to the sword with the greatest ferocity. Crowds of fatherless and motherless children wandered about destitute and homeless. Le Grand called upon Pestalozzi to go to the rescue of the orphans at Stanz. He gladly went.

The regulations and aim of the institution—a poor-house—to be established are set forth in the decree issued by the Directory on the 5th of December, 1798. They are: "(1) The immediate control of the poor-house at Stanz is entrusted to Citizen Pestalozzi. (2) Children of both sexes, taken from among the poorest, and specially from the orphans in the Stanz district, will be received in it and brought up free of charge. (3) Children will not be received under the age of five

years; they will remain till they are fit to go into service, or to learn such a trade as cannot be taught to them in the institution.

“(4) The poor-house will be conducted with all the care and economy that befits such an institution. It will be the rule that children shall be gradually led to take part in all the work necessary for the carrying on and support of the establishment. The time of the pupils will be divided between work in the fields, the house and the schoolroom. An endeavour will be made to develop in the pupils as much skill, and as many useful powers, as the funds of the institution will permit. So far as it is possible to do so without endangering the industrial ends which are to be aimed at, a few lessons will be given during the manual work.

“(5) All the out-buildings of the women’s convent at Stanz are to be given up to the work of the institution, and also a sufficient portion of the adjoining meadowland. The buildings will at once be repaired and fitted up for the accommodation of eighty pupils, in accordance with the plans drawn up by Citizen Schmid, of Lucerne. (6) For the founding of the asylum the Minister of the Interior will, once for all, place a sum of two hundred and forty pounds at the disposal of the Committee of the Poor” [Pestalozzi; Truttman, the sub-prefect of Arth; and Businger, the parish-priest of Stanz]. This decree was based upon a plan drawn up by Pestalozzi, and warmly approved by Stapfer, Rengger and Le Grand.

The actual plan of work is given by Pestalozzi in a letter to Rengger: “The hours of work and study are now fixed as follows: from six to eight, lessons; then

manual work till four in the afternoon; then lessons again till eight". This letter was written on the 19th April, 1799.

A very real interest was taken by Government in the institution, as is shown by the frequent reports concerning it, and by the fact that on the 24th of May, 1799, Pestalozzi took all his children to Lucerne, where they were welcomed by the members of the Executive Directory. On this occasion each child received a silver coin as a present.

While the convent was being built and as soon as a single room could be made use of, Pestalozzi received forty children—very soon after increased to eighty—and began his work. This was in January, 1799, in a time of severe cold. Here, in this one room in which master and pupils had to live both by day and night, was made an experiment in practical education the history of which will, probably, never die. For five months Pestalozzi worked like any slave and nearly killed himself by overwork. He was almost without help: "I opened the establishment with no other helper than a woman-servant". Nothing was prepared for the children: "Neither kitchen, rooms, nor beds were ready to receive them. At first this was a source of incredible trouble. For the first few weeks I was shut up in a very small room; the weather was bad, and the alterations, which made a great dust and filled the corridors with rubbish, rendered the air very unhealthy. The want of beds compelled me at first to send some of the poor children home at night; and they came back next day covered with vermin.

"Most of them on their arrival were very degenerated specimens of humanity. Many of them had a sort of

chronic skin-disease, which almost prevented their walking ; or sores on their heads, or rags full of vermin ; many were almost skeletons with haggard, careworn faces and foreheads wrinkled with distrust and dread ; some brazen, accustomed to begging, hypocrisy, and all sorts of deceit ; others broken by misfortune, patient, but suspicious, timid, and entirely devoid of affection. There were some spoilt children amongst them who had known the sweets of comfort ; these were full of pretensions. They kept to themselves, regarding with disdain the little beggars who had become their comrades ; tolerating this equality ; and quite unable to adapt themselves to the ways of the house, which differed too much from their old habits.

“ But what was common to them all was a persistent idleness, resulting from the want of any exercise of their bodily powers and the faculties of their intelligence. Out of every ten children there was hardly one who knew his A B C ; as for any other knowledge, it was, of course, out of the question. . . .

“ I was alone with them from morning till night. It was from my hand that they received all that could do good to their souls and bodies. All needful help, consolation and instruction they received directly from me. . . . We shared our food and drink. . . . I was with them when they were strong and by their side when they were ill. I slept in their midst. I was the last to go to bed and the first to get up. When we retired to bed I prayed with them, and, at their own request, taught them till they fell asleep. Their clothes and bodies were intolerably filthy, but I looked after both myself, and was thus constantly exposed to the risk of contagion.”

Although sickness broke out amongst them, "on the return of spring it was evident to everybody that the children were doing well, growing rapidly, and gaining colour. Certain magistrates and ecclesiastics, who saw them some time afterwards, stated that they had improved almost beyond recognition." But, better still: "I witnessed the growth of an inward strength in my children, which, in its general development far surpassed my expectations, and in its particular manifestations not only often surprised me, but touched me deeply. . . . My children soon became more open, more contented and more susceptible to every good and noble influence than any one could possibly have foreseen when they first came to me, so devoid were they of ideas, good feelings and moral principles. . . . I had incomparably less trouble to develop those children whose minds were still blank, than those who had already acquired inaccurate ideas. . . . My pupils developed rapidly; it was another race. . . . The children very soon felt that there existed in them forces which they did not know, and in particular they acquired a general sentiment of order and beauty. They were self-conscious, and the impression of weariness which habitually reigns in schools vanished like a shadow from my classroom. They willed, they had power, they persevered, they succeeded, and they were happy."

The kind of children with which Pestalozzi had to deal is shown in his report on them to the Directory; *e.g.*, "Jacob Baggenstoss, fifteen, of Stanzstad: father dead, mother living: good health, small capacity; can do nothing more than spin cotton: accustomed to begging. . . . Gaspard Joseph Waser, eleven, of Stanzstad: father living, mother dead: healthy, and of good

abilities, rough detestable habits: does not know his A B C: cannot spin: accustomed to begging. . . . Mathias Odermatt, eight, of Stanz: father killed, mother living: deformed and sickly, weak and idle: knows nothing; poor. . . . Anna Josephine Amstad, fifteen, of Stanz: father dead, mother living: healthy, ordinary ability: can read a little: can spin: extremely poor. . . . Catherine Aieer, five, of Stanz: father killed, mother living: healthy, very good abilities: knows nothing: poor."

His success with his pupils is testified by Truttman and Businger in their reports to the Directory. The former says: "The poor-house is doing well. Father Pestalozzi works persistently night and day. There are now sixty-two children who are boarded and employed all day in the establishment, though only fifty can stay at night, owing to insufficient beds. It is amazing to see all that this excellent man does and what great progress his pupils have made in so short a time. They are now eager for instruction." Businger says: "The poor-house has started, and is going on well. Over seventy children have already been received, and every day brings more applicants for admission. Citizen Pestalozzi works unceasingly for the progress of the institution, and it is difficult to believe one's eyes and ears when one sees and hears all that his work has performed in so short a time." These reports, be it noted, were written the first on 11th February, 1799, and the second in the same week; whilst the first pupils were received into the establishment on 14th January, 1799.

Truttman's opinions are not the less valuable because he was not blind to Pestalozzi's weaknesses. On 25th March, 1799, he wrote to the minister as follows: "I

must tell you frankly that the economical administration of the establishment, the classification of the children, both for instruction and manual work ; and the setting to work of the necessary superintendents and masters, can no longer be delayed without injury to this charitable institution. . . . I admire the zeal of Citizen Pestalozzi, and his untiring and devoted activity for the institution ; this deserves honour and recognition ; but I foresee that he will not be able to carry out his ideas, nor to give the undertaking the carefully arranged development which is necessary for its success. Indeed, without a new organisation, which shall provide for all the various requirements of the institution, it cannot succeed. This excellent man has both firmness and gentleness, but unfortunately he often uses them at the wrong time. . . . The establishment needs a larger staff.”

This work was done in the face of great opposition on the part of the parents, and much misunderstanding by others. Pestalozzi was accused of under-feeding the children ; being too severe with them ; and seeking only his own advantage. Children were persuaded to run away from the school, but not “till they were free of their vermin and their rags”. As a Protestant, Pestalozzi was suspected of a design to convert the children, who were practically all Roman Catholics. Writing to his friend Gessner, he says : “ You will hardly believe that it was the Capuchin friars and the nuns of the convent that showed the greatest sympathy with my work. Few people, except Truttman, took any active interest in it. Those from whom I had hoped most were too deeply engrossed with their high political affairs to think of our little institution as having the least degree of importance.”

Just as the French army was the cause of the opening of the institution, so, five months later, it led to its being closed. Retreating before the Austrians they were in need of a hospital, and hearing that there was a large building at Stanz they turned Pestalozzi and his children out on 8th June, 1799, and took possession of the convent. Zschokke, the Government agent, says that Pestalozzi gave to each of the children who were sent away "a change of clothes, some linen, and a little money". When the French departed, some of the children returned, and Zschokke on 28th June reported to Minister Rengger that "there still remain in the establishment twenty-two children of both sexes".

This closing of the institution was a blessing in disguise for Pestalozzi himself. He was very ill and spitting blood. He went up the Gurnigel mountain, in the Bernese Oberland, where there was a medicinal spring. Of this visit he writes: "On the Gurnigel I enjoyed days of recreation. I required them; it is a wonder that I am still alive. I shall not forget those days as long as I live: they saved me, but I could not live without my work." In spite of these facts he was much blamed for giving up the school at Stanz.

How little for himself, yet how much for humanity, did he gain at Stanz. There he discovered that his ideas for the improvement of the people were not idle dreams. He says: "I had children at Stanz whose powers, not dulled by the weariness of unpsychological home and school discipline, developed very quickly. It was like another race. . . . I saw the capacity of human nature, and its peculiarities, in full play—in many ways. Its defects were those of healthy nature, totally different from the faults caused by bad and artificial teaching—

hopeless languishing and complete crippling of the mind.

“I saw in this combination of ignorance and unschooled faculties a power of understanding, and a firm conception of the known and the seen of which our A B C puppets have no notion.

“I learned from them—I must have been blind not to have learned—to know the natural relation which real knowledge bears to book-knowledge. I learnt from them what a handicap this one-sided letter-knowledge and entire reliance on words (which are only sound and noise when there is not something behind them) must be. I saw what a hindrance this may be to the real power of observation, and the firm conception of the objects which surround us.

“Thus far I got at Stanz. I felt that my experiment proved the possibility of founding popular instruction on psychological grounds: of laying true knowledge, gained by sense-impression at the foundation of instruction; and of tearing away the mask of its shallow bombast. I felt that I could solve the problem to unprejudiced and intelligent men: though, as I well knew, I could never enlighten the prejudiced crowd, who are like geese which, ever since they cracked the shell, have been confined in coop and shed, and have lost all power of flying and swimming” (*How Gertrude Teaches*).

When he was sufficiently recovered from his illness he again began schoolwork. This time it was at Burgdorf. Again he was beset with jealousy and misunderstanding; so much so that it was only through the help of influential friends that he was allowed to work in a small school the master of which was a shoemaker. From this school the parents of the scholars and the

shoemaker soon got him removed, and he was sent to a dame school where only children between four and eight years of age were admitted—an infants' school—and where they were taught only reading and writing. It was thought that, at any rate, he could do very little harm there. Says Pestalozzi: "It was whispered that I myself could not write, nor work accounts, nor even read decently. Popular reports are not always entirely destitute of truth; it is true I could not write, nor read, nor work accounts well." No: he could only think like a genius and work like a hero!

It is interesting, in this connection, to remember that when he wrote his *Leonard and Gertrude* it was "insufferably incorrect and unpolished," and "the want of orthographical accuracy" had to "be rectified". At Neuhof he taught the children to work so well and quickly in arithmetic that he himself had to use a slate and pencil to check their answers. He had vowed to have done with books when he left college, and to learn through things and work. To this resolution he had firmly kept. He writes: "For these last thirty years I have read no book, nor have I been able to read any; I had no language left for abstract notions; in my mind there was nothing but living truths, brought to my consciousness in an intuitive manner, in the course of my experience; but I was no more able to analyse those truths, than to bring to my recollection the details of the observations by which I had been led to their discovery". These passages must, of course, be interpreted by what we know of his education and training, and his life-work thus far.

In this small infants' school of twenty-five children, where the amiable indifference of the good old dame

left him a free hand, Pestalozzi was thoroughly at home. His genius and his fatherly methods were in suitable surroundings, and his work was a triumphant success. After eight months' work the Burgdorf School Commission examined the children, and then wrote this public letter to Pestalozzi: "The surprising progress of your little scholars of various capacities shows plainly that every one is good for something, if the teacher knows how to get at his abilities and develop them according to the laws of psychology. By your method of teaching you have proved how to lay the groundwork of instruction in such a way that it may afterwards support what is built on it. . . . Between the ages of five and eight, a period in which according to the system of torture enforced hitherto, children have learnt to know their letters, to spell and read, your scholars have not only accomplished all this with a success as yet unknown, but the best of them have already distinguished themselves by their good writing, drawing and calculating. In them all you have been able so to arouse and excite a liking for history, natural history, mensuration, geography, etc., that thus future teachers must find their task a far easier one if they only know how to make good use of the preparatory stage the children have gone through with you." Further, his plan of instruction "could be applied during the earliest years at which instruction could be given in the family circle: by a mother, by a child who was a little older than the beginner, or by an intelligent servant whilst doing her household work". All of which was doubtless the report of the School Commission, but the voice is the voice of Pestalozzi and the words are his words—the commissioners doubtless saw enough to believe in Pestalozzi,

and then, like wise men, were content to let him speak through them.

Soon after the issue of this report Pestalozzi was appointed master of the second boys' school of Burgdorf. Here he did not succeed so well; and soon had to resign owing to a pulmonary attack. When well enough to resume work he obtained such effectual help from some of his friends in office that the Helvetic Government granted him the use of the castle at Burgdorf for a school—M. Fischer having died. He managed—thanks to the help of the "Society of the Friends of Education," which had been founded, on the initiative of Stapfer, for the purpose of promoting Pestalozzi's work—to raise a loan for preparing and furnishing the building and, towards the end of 1799, opened an educational establishment. In this he was assisted by M. Krüsi, a village schoolmaster—then twenty-five years of age—who had shortly before come to Burgdorf with twenty-eight orphans, whose parents were the victims of the Austro-Russian and French war. Krüsi had continued to teach these children in a day-school in the castle at Burgdorf, under the superintendence of M. Fischer, Secretary to the Helvetic Minister of Public Instruction, who had been sent by the Government to open a training college for teachers in the castle, but, owing to the necessary funds not being supplied, had been unable to do so. M. Fischer became greatly interested in Pestalozzi's theories and work; had many talks with him; and was the means of bringing him and Krüsi together.

Pestalozzi was to conduct a boarding-school for the children of the well-to-do people, and Krüsi was to continue his day-school. In a letter (February, 1801) to the central Government at Bern he declares his aims to be:—

(1) To pursue the development, as experience should suggest, of his methods in the different branches of public and private education ;

(2) To publish the results of his researches and experiments, and to write, for the guidance of well-meaning parents and teachers, such manuals as would enable them to carry out his plans of instruction ; and

(3) To train teachers in the theory and practice of his work so that they should be wise and skilful therein.

The means by which he proposed to carry out these objects were :—

(1) The day-school at Burgdorf, of which Krüsi's orphans were the nucleus ;

(2) The boarding-school just started, which was designed for children of the middle and higher classes ;

(3) A teachers' training college (normal school) such as had been proposed under M. Fischer ; and

(4) An orphan asylum—to be supported by private subscriptions, and the profits, if any, from the boarding-school, and the sale of books.

Assisted by two other teachers, Pestalozzi and Krüsi soon began successfully to realise these aims and ends. On the first day of the year 1801, at the request of his friend Gessner, a bookseller of Zurich, he wrote an account of his experiments and work up to this point under the title : *How Gertrude Teaches her Children ; an Attempt to give Directions to Mothers how to Instruct their own Children.* This is really an autobiography and exposition of his theories. There is no Gertrude, other than Pestalozzi himself ; and there are no children, other than all children. With the contents of this book we shall deal later. It was published in October,

1801; attracted much attention; made many converts; and led several enthusiasts to go to Burgdorf to see Pestalozzi and study his work.

Besides this, perhaps the most profound and important of his writings, the following books were issued from the institution at Burgdorf: (1) *Help for Teaching Spelling and Reading* (1801); (2) *Pestalozzi's Elementary Books* (1803), in six parts, viz., (a) *The A B C of Intuition, or Intuitive-instruction in the Relations of Number* (three parts); (b) *Intuitive-instruction in the Relations of Dimensions* (two parts); and (c) *The Mothers' Manual, or Guide to Mothers in Teaching their Children how to Observe and Think* (one part). The last three (a, b and c) are teachers' handbooks on the elements of arithmetic, geometry and language. It has been said of them that those who really needed such books would, by the aid of the books themselves, neither understand the principles nor use the exercises properly; whilst those who understood the principles and exercises would not need the books.

The whole work of teaching, and writing the text-books, was carried on by Pestalozzi and three assistants, viz., Krüsi, of whom we have already spoken; Tobler, who was invited by Pestalozzi, at Krüsi's suggestion, to help him in the teaching of writing; and Buss, who was asked by Tobler, at the suggestion of Krüsi, to assist Pestalozzi in the teaching of drawing.

Their school-work was inspected by a commission appointed by the "Society of the Friends of Education"—which financed Pestalozzi—in whose report are these remarks: "The first thing we noticed was that Pestalozzi's pupils learn to spell, read, write and calculate quickly and well, achieving in six months results which

an ordinary village schoolmaster's pupils would hardly attain in three years. It is true that schoolmasters are not usually men like Pestalozzi, nor do they discover assistants like those of our friend. But it appears to us that this extraordinary progress depends less upon the teachers than the method of teaching. . . .

“Who does not know how ready the youngest children are to give everything a name; to put things together, and then to take them to pieces again, for the sake of fresh re-arrangements? Who does not remember that he preferred drawing to writing? Who does not know that the most unlearned men are often the quickest at mental reckonings? Who does not know that children, both boys and girls, delight—almost as soon as they can walk—in playing at soldiers, and in other forms of exercise?”

“It is on these simple and well-known facts that Pestalozzi bases his method of instruction. Were it not for the fact that teachers are daily making the same mistakes as others made before them, we should feel inclined to inquire how it is that such an idea never occurred to any one before.”

An independent witness, a visitor to the institution—Charles Victor von Bonstetten—says: “His children have learned, in from six to ten months, writing, reading, drawing, and a little geography and French, and have also made astonishing progress in arithmetic. They do everything cheerfully; and their health seems perfect. . . . I look upon Pestalozzi's method as a precious seed, still young and undeveloped, but full of promise. The success the method has already obtained should suffice to convince any impartial thinker of its excellence, . . .

“The children know little, but what they know they know well. In my opinion, there could be nothing better than the Burgdorf school for children of eight or nine. . . . The children are very happy, and obviously take great pleasure in their lessons : which says a great deal for the method.”

A Nuremberg merchant, though at first prejudiced against the work, is compelled to testify thus : “I was amazed when I saw children treating the most complex calculations of fractions as the simplest matter in the world. Problems which I myself could not solve without careful work on paper, they did easily in their heads, giving the correct answer in a few moments, and explaining the method of working with ease and facility. They seemed quite unconscious of having done anything extraordinary.”

The school was inspected by a public commission, appointed by the local Council, in June, 1802. Their report was drawn up by Ith, the President of the Bern Council of Public Education. This report first deals with Pestalozzi's principles, and declares that he “has discovered the real and universal laws of all elementary teaching”. The moral and religious life of the establishment receives special praise ; as does the discipline, which, it is remarked, is entirely based upon affection.

M. Soyaux, of Berlin, who visited the institution in August, 1802, thus speaks of certain points about it, in a pamphlet which he wrote : “His discipline is based upon the principle that children must be allowed the greatest possible liberty, and that only when they take advantage of this liberty must they be interfered with. . . . They are taught by ten masters. There are also

a certain number of foreigners at the castle, who are there to study the method.

“ The institute is young, and Pestalozzi’s principles are still undergoing development. As they are not yet mature, it causes the organisation of the establishment to be still incomplete. Director and assistants are working with all their power to perfect the undertaking. One tries to improve certain appliances ; another strives to find a natural way of teaching reading, number, etc. Would that all educational institutions presented such a picture of concord and harmony, and showed the same zeal in advancing from progress to progress.”

At Burgdorf Pestalozzi reached the highest point of his success as a teacher and educationist, though not of his fame. His popularity amongst his own people also was at its greatest. On this popularity Dr. Biber remarks : “ It is a fact, of which the life of almost every distinguished man affords evidence, that the great mass of the public, dull of comprehension and slow to acknowledge merit, is in the same proportion unintelligently lavish of its admiration, as soon as a man has safely crossed the line of public opinion, and gone through the ordeal of the critical ‘ sailor’s dip ’. This proved to be the case with Pestalozzi. He who had been an object of commiseration among philanthropic wiseacres, and the butt of every bad joke from the lips of the thoughtless and the unfeeling, was now extolled to the skies as the man of the age ; and so high ran the tide of popularity in his favour, that he was chosen to be one of the deputies sent to Paris in 1802, pursuant to a proclamation of the French Consul, in order to frame a new constitution which should unite the con-

flicting interests of Switzerland, and put a stop to its internal dissensions." As a matter of fact he was elected by one canton and one town.

Before his departure for Paris he published a political pamphlet entitled *Views on the Objects to which the Legislature of Helvetia has chiefly to direct its attention*, in which he put forward some wise and moderate views for reform and the remedy of existing evils. At Paris he tried to interest Napoleon and his chief ministers in his educational work, but the First Consul declined to see him, and declared that he could not be bothered about questions of A B C. On his return to Burgdorf, Pestalozzi is said to have remarked on being asked, "Did you see Bonaparte?"—"No, I did not see Bonaparte; and Bonaparte did not see me".

The outcome of the visit of the Swiss deputies to Paris was that the form of government of their country was changed; the "Executive Directory" of five members was dissolved; an annual assembly of deputies (with limited powers) substituted; and large powers of self-government restored to the cantons—the Act of Mediation. Two results of the new order of things were that Pestalozzi was turned out, on 22nd August, 1804, of the castle at Burgdorf, which was required for the canton Government offices; and there was no longer any central national authority to assist him in his work. However, several towns made generous offers to him if he would go to them with his school. The canton De Vaud gave him the choice of several castles, which had previously been the residences of deputy governors. The Government of the canton of Bern offered Pestalozzi the use of the old Johanniter monas-

tery at Munchen Buchsee—a few miles north-west of Bern, and near to Fellenberg's school.

Pestalozzi decided to take his upper school to Yverdon, and to send his lower school to Munchen Buchsee; since he only had the promise of one year's tenancy of the old monastery. It was arranged—by his staff, and apparently without his knowledge, in the first instance—that de Fellenberg should have the practical control of the institution, while Pestalozzi was to act as educational adviser. This he says “was not without my consent, but to my profound mortification”. It was impossible that such an arrangement for such a man as Pestalozzi could turn out well. Soon differences and difficulties arose between Pestalozzi and de Fellenberg.

Finally the whole of the members of the institution at Burgdorf were transferred to Yverdon, and were glad to be once more under the care of “Father Pestalozzi”. The teachers declared that they preferred the want of government under him to the good government of de Fellenberg—the “man of iron” as Pestalozzi called him.

Ramsauer says of his stay at Munchen Buchsee: “I was unhappy for the first time in my life. I was still table-boy [servitor, *i.e.*, one paying for his schooling by certain domestic services] and under-master, but I had nobody to comfort my heart. We missed more than anything else the love and warmth which vivified everything at Burgdorf, and made everybody so happy. With Pestalozzi himself it was the heart which dominated everything: with Fellenberg the mind. Nevertheless, Munchen Buchsee had its good points too—there was more order there, and we learned more than at Burgdorf,

“ In February, 1805, to my great delight, Pestalozzi sent for me to go back to him at Yverdon, where I once more found a father’s affection and my dear masters Krüsi and Buss. A few months later the whole institute had rejoined Pestalozzi at Yverdon Castle.”



VIEW OF YVERDON.

From a sketch in the possession of Miss Mayo.

CHAPTER VI.

YVERDON, 1805-1825.

AT Yverdon Pestalozzi reached the summit of his fame and found the grave of his practical work. In the institute at Yverdon the large scheme which had been drawn up for Burgdorf was not attempted, but all efforts were concentrated on the education of the pupils who came to the castle, with the result that greater success than ever before was, at first, obtained. Pupils came from England, France, Germany, Italy, Russia and Spain. Deputations were sent from many countries to study and report on the work. Private individuals went from all parts, some taking pupils with them, to see the great things which were being done. Amongst these were Froebel (with pupils), Herbart, Dr. Mayo (founder of the famous Pestalozzian school at Cheam—with pupils), Dr. Bell (author of *The Madras System*), Robert Owen, Lord Brougham, Karl von Raumer (the great German historian of education—with a pupil), Karl Ritter, M. Jullien (writer on Pestalozzi's work), M. Guillaume (biographer of Pestalozzi), Miss Edgeworth (author of *Practical Education*) and many others.

The Emperor of Russia sent him this letter:—

“SIR,

“The method of teaching pointed out in your works, and practised in the institute of which you are

the founder, have appeared to me in every way calculated to extend true knowledge and to produce enlightened instructors. Having made myself acquainted with the results daily obtained by you, I have been able fully to appreciate the utility of your labours. I feel pleasure in being able to give you some distinguished proof of the interest with which I have viewed so valuable an undertaking, by creating you a Chevalier of the Order of St. Wladimir of the fourth class, of which I herewith send you the decoration, accompanied with the assurance of my consideration.

“(Signed) ALEXANDER.

“*Novr.* 16, 1814.”

The Prussian Government sent seventeen young men for a three years' course, to be trained as teachers; so that, as the Minister writes to Pestalozzi: “They will be prepared not only in mind and judgment, but also in heart, for the noble vocation which they are to follow, and will be filled with a sense of the holiness of their task, and with new zeal for the work to which you have devoted your life”. Fichte, in his *Addresses to the German Nation*, delivered in Berlin in 1807-8, declared that only through an efficient system of national education could national regeneration come; and when asked which existing institution of the actual world could do such a work, he replied: “The course of instruction which has been invented and brought forward by Henry Pestalozzi, and which is now being successfully carried out under his direction”. This was spoken in no spirit of unqualified praise, for he did not hesitate to criticise adversely several points in Pestalozzi's schemes.

About the same time the Queen of Prussia wrote, in

her private diary : “ I am reading *Leonard and Gertrude*, and I delight in being transported into the Swiss village. If I could do as I liked I should take a carriage and start for Switzerland to see Pestalozzi ; I should warmly shake him by the hand, and, my eyes filled with tears, would speak my gratitude. With what goodness, with what zeal, he labours for the welfare of his fellow-creatures ! Yes, in the name of humanity, I thank him with all my heart.”

Dr. Biber thus describes the inner life of the institute during the earlier years at Yverdon : “ Persons of the most different gifts and abilities, and of the most opposite characters, were united together by the unaffected love which Pestalozzi, in years a man verging on the grave, but in heart and mind a genuine child, seemed to breathe out continually, and to impart to all that came within his circle. His children forgot that they had any other home, his teachers that there was any world beside the institution. Even the eldest members of this great family, men who had attained all the maturity of manhood, venerated Pestalozzi with all the reverence of true filial affection, and cherished towards each other a genuine brotherly feeling. . . .

“ Teachers and children were entirely amalgamated : they not only slept in the same rooms, and shared together all the enjoyments and labours of the day ; but they were on a footing of perfect ease and familiarity. There was no pedantic superiority, no foppery of condescension, on the part of the teacher ; nor was there in the pupils the slavish humility of fear, or the arrogant presumption of an equality which does not exist in the nature of things. The same man that read a lecture on history one hour, would, perhaps, in the next sit on

the same form with his pupils in a lesson of arithmetic or geometry ; nay he would, without compromising his dignity, request their assistance, and receive their help. Such facts were of daily occurrence in a house to which every one was a teacher of what he knew, and every one, even the head himself, a learner of what he knew not. [Froebel used thus to sit as a pupil amongst the boys.]

“Pestalozzi’s example operated like a spell ; and his teachers submitted in his house to arrangements which the same men, perhaps, would nowhere else have been able to endure. They had the immediate inspection of the different apartments, nay of the beds and clothes, as well as of the books of the children. In the morning every teacher assisted those that were especially committed to his care, as far as their age might require it, in washing and dressing themselves ; which being done, he conducted them to the great hall, where the whole family was assembled for morning service. During the day he lost sight of them only while they were engaged in lessons with other teachers ; but at meals, and in the hours of recreation, he joined them again ; he participated in their plays, accompanied them in their walks, and at the close of the day, followed them again to evening prayers, and thence to bed. Yet in all this, there was on the part of the pupils perfect freedom ; they were not forced to be with their teacher : but their teacher was always ready to be with them ; and as his presence imposed upon them no artificial restraint, they delighted in his company.”

The actual order of the day for the pupils was : “In the morning, half an hour before six the signal was given for getting up. Six o’clock found the pupils ready for

their first lesson, after which they were assembled for morning prayer. Between this and breakfast the children had time left them for preparing themselves for the day ; and at eight o'clock they were again called to their lessons, which continued, with the interruption of from five to seven minutes' recreation between every two hours, till twelve o'clock. Half an hour later dinner was served up, and afterwards the children allowed to take moderate exercise till half-past two ; when the afternoon lessons began, and were continued till half-past four. From half-past four till five there was another interval of recreation, during which the children had fruit and bread distributed to them. At five the lessons were resumed till the time of supper, at eight o'clock, after which, the evening prayer having been held, they were conducted to bed about nine.

“The hours of recreation were mostly spent in innocent games on a fine common, situated between the castle and the lake, and crossed in different directions by beautiful avenues of chestnut and poplar trees. On Wednesday and Sunday afternoons, if the weather permitted it, excursions of several miles were made through the beautiful scenery of the surrounding country. In summer the children went frequently to bathe in the lake, the borders of which offered, in winter, fine opportunities for skating.

“In bad weather they resorted to gymnastic exercises in a large hall expressly fitted up for that purpose. This constant attention to regular bodily exercise, together with the excellent climate of Yverdon, and the simplicity of their mode of living, proved so effectual in preserving the health of the children, that illness of

any kind made its appearance but very rarely, notwithstanding the number of pupils amounted at one time to upwards of a hundred and eighty."

Professor Vulliemin, in his recollections of the time he spent as a pupil under Pestalozzi at Yverdon, says: "It [the castle] was built in the shape of a huge square, and its great rooms and courts were admirably adapted for the games as well as the studies of a large school. Within its walls were assembled from a hundred and fifty to two hundred children of all nations, who divided their time between lessons and happy play. It often happened that a game of prisoner's base, begun in the castle court, would be finished on the grass near the lake. In winter we used to make a mighty snow-fortress, which was attacked and defended with equal heroism.

"Early every morning we went in turns and had a shower of cold water thrown over us. We were generally bare-headed, but once, when a bitterly cold wind was blowing, my father took pity on me, and gave me a hat. My companions no sooner saw it than they raised the shout, 'A hat, a hat!' It was quickly knocked off my head, and a hundred hands sent it flying about the playground and corridors, till at last it went spinning through a window and fell into the river that flows by the walls of the castle. It was carried away to the lake and I never saw it again.

"Our masters were for the most part young men, and nearly all 'sons of the revolution,' who had grown up around Pestalozzi, their father and ours. There were, indeed, a few educated men and scholars who had come to share his task; but, taken altogether,

there was not much learning. I myself heard Pestalozzi boast, when an old man, of not having read anything for forty years. Nor did our masters, his first pupils, read much more than Pestalozzi himself. Their teaching was addressed to the understanding rather than the memory, and had for its aim the harmonious cultivation of the germs implanted in us by Providence. 'Make it your aim to develop the child,' Pestalozzi was never tired of repeating, 'and do not merely train him as you would train a dog, and as so many children in our schools are often trained.'

"Our studies were almost entirely based on number, form and language. Language was taught us by the help of sense-impression; we were taught to see correctly, and in that way to form for ourselves a just idea of the relations of things. What we had thoroughly understood we had no trouble to express clearly.

"We had to discover the truths of geometry for ourselves. After being once put in the way of it, the end to be reached was pointed out to us, and we were left to work alone. It was the same with arithmetic, which we did aloud, without paper. Some of us became wonderfully quick at this, and as charlatanism penetrates everywhere, these only were brought before the numerous strangers that the name of Pestalozzi daily attracted to Yverdon. We were told over and over again that a great work was going on in our midst, that the eyes of the world were upon us, and we readily believed it."

De Guimps gives this account of the daily routine, etc., for the boys: "At seven o'clock, after the first lesson, the pupils washed themselves in the courtyard.

The water, pumped from the well, ran through a long pipe with holes on both sides, from which each child received a pure, fresh stream—jugs and basins being unknown. After our toilet came breakfast, consisting of soup. Lessons began again at eight. At ten came an interval for rest, when any one who was hungry could get dried fruit and bread from Mrs. Krüsi. At noon there was an hour's recreation for bathing or prisoner's base on the grass behind the lake. At one o'clock dinner of soup, meat and vegetables. Lessons again from half-past one to half-past four. Then the afternoon meal; either of cheese, fruit, or bread-and-butter. Each could take his share away with him, and eat it where he liked during the play-hour, which lasted till six o'clock, and which was passed, when the weather was fine, either behind the lake or in the large garden adjoining the castle, where every child has his own little garden plot. From six to eight o'clock more lessons, and then supper, which was much the same as dinner. . . . The food, though not very delicately prepared, was plain, wholesome and abundant. . . .

“The pupils were allowed very considerable liberty. As the two doors of the castle were open all day, and there was no porter, they could go in and out at all hours as if they were at home, and they did not abuse this freedom. The lessons generally lasted ten hours a day. No one lesson was longer than an hour, and they were all followed by a short interval, during which the classes usually changed rooms. Some of the lessons consisted of gymnastic exercises, or some sort of manual work, such as cardboard work or gardening. The last hour of the day was a free hour, given up to what the pupils called their own work. They could do

anything they wished—draw, read geography, write letters, or arrange their note-books. . . .

“Pestalozzi's rooms were on the second floor of the north front. He often invited the masters there to take coffee with him, and not infrequently held receptions in the evening, to which some of the pupils were asked. . . . The end of the year was devoted to making New Year albums to send to parents, containing drawings, maps, mathematical problems, fragments of history, descriptions of natural objects, and literary compositions. On New Year's day . . . the pupils of each class decorated their room, transforming it into a woodland scene, with cottage, chapel, ruins, and sometimes a fountain, which was so arranged as to play when Pestalozzi came in. Fir-branches, ivy and moss were fetched in large quantities from the neighbouring forests, and transparencies, with emblems and inscriptions, were secretly prepared; for the decoration of each room was to be a surprise, not only to Pestalozzi, but to the pupils of the other classes. Songs were also sung in honour of Pestalozzi. The principal idea in most of the inscriptions was: ‘In summer you take us to see nature: to-day we try to bring nature to see you’. Frequently, on this day, the pupils performed a dramatic piece, the subject generally being one of the great episodes from Swiss history of mediæval times. For these plays the actors made their own costumes and weapons from coloured paper and cardboard.”

The following extracts from the diary of Mérian, of Basle, a pupil from 1806 to 1810, give a peep into the domestic life at the castle:—

“12th Jan., 1808.—Pestalozzi's birthday festival. At the end of the day the richer pupils made a collection

amongst themselves for the poor of the town of Yverdon. Mrs. Pestalozzi and Mrs. Kuster took charge of the money, which amounted to four pounds. . . .

“30th Sept., 1809.—To-day is the fortieth anniversary of Father Pestalozzi’s marriage. Great rejoicings; discourse by Niederer; beautiful songs sung, room decorated with garlands. Grand supper for three hundred people in five rooms. Afterwards dancing, opened by Mr. and Mrs. Pestalozzi alone, in the old-fashioned way.”

The curriculum included ancient and modern languages, geography, natural history, physical science, mathematics, drawing, singing, history and religion. Not all of these were taught according to the reformed methods of Pestalozzi, but only geography, mathematics, spelling, perspective drawing and singing. Pestalozzi’s *Elementary Books* were here used only for beginners, and the individual teachers were left to apply the principles to their own teaching so as to make their instruction more and more “mentally intuitive”. Some of the courses which were thus worked out by the teachers themselves were published in the form of manuals on arithmetic, geometry and perspective drawing—by Krüsi, Lodomus, Ramsauer and others. One such manual was published in Dublin in 1821, and has this title-page: “*Intuitive Mental Arithmetic*, theoretical and practical, on the principles of H. Pestalozzi, by L. Du Puget, late a student and teacher, at his institute, at Yverdon, in Switzerland, and, at present, a master in the establishment at Abbeyleix, in Ireland”. In the preface is this interesting paragraph: “It may be necessary to give the meaning of the word *Intuition* as used in this work, In order to fix the

attention of the children and to give them clear ideas of number, it has been found extremely useful to calculate with pebbles, beans, marbles, etc., and this has been termed the teaching of Intuition or the Intuitive method."

Certain books drawn up by Joseph Schmid (the mathematical teacher of the institute), and approved by Pestalozzi and his staff, are practically authorised and improved editions of the *Elementary Books*. These were intended to be aids for teachers, and included: (1) *The Elements of Drawing*; (2) *The Elements of Form and Size, commonly called Geometry* (in three parts); (3) *The Elements of Number, forming the basis of Algebra*; (4) *The Elements of Algebra*; and (5) *Application of Number to Space, Time, Value and Ciphers*. A book on similar lines, a *Manual of Elementary Geography*, was published by Henning (a biographer of Pestalozzi), one of the young men sent from Prussia to be trained under Pestalozzi. Pfeiffer and Nägeli, both teachers at the institute, drew up a series of exercises in singing, together with some simple tunes specially written for an educational course.

The results of the curriculum were necessarily bad. As Raumer says: "Most of the teachers of the institution might be regarded as so many separate and independent teachers, who had indeed received their first instruction there, but who had passed much too soon from learning to teaching, and wished to see how they could fight their way through. There was never any such thing as a real pedagogical lecture. Under such a course of training, it could not happen otherwise than that some of the teachers should strike into peculiar paths; of this Schmid gave an example. But it was

an equally necessary consequence that the usual characteristic of such teachers should make itself apparent: namely, a great want of self-knowledge and of a proper modest estimate of their own labours.

“‘Man only learns to know himself in man.’ I must know what others have done in my department of science, in order that I may assign the proper place and rank to my own labours. It is incredible how many of the mistaken views and practices of Pestalozzi and his teachers sprang from this source.”

At the other extreme was the work of the subordinate teachers. These were supposed rigidly to follow the *Elementary Books*, neither subtracting from nor adding to them. Moreover, though they worked willingly and for the love of Pestalozzi, and the work's sake, they were sadly overworked. Ramsauer—who was first a boy under Pestalozzi at Burgdorf, and later one of his most loyal and devoted assistants—thus describes the teachers' work: “They were to help to bear every burden, every unpleasantness, every domestic care, and to be responsible for everything. Thus, for example, in their leisure hours (that is, when they had no lessons to give) they were required at one time to work some hours every day in the garden, at another to chop wood for the fire, and, for some time, even to light them in the morning, or transcribe, etc.; there were some years in which no one of us was found in bed after three o'clock in the morning; and we had to work, summer and winter, from three in the morning till six in the evening.” Ramsauer's own time-table shows that he was almost wholly occupied with official duties from two or three o'clock in the morning till nine in the evening.

De Guimps tells us that "the youngest masters, who were generally Burgdorf pupils, were in charge out of school. They slept in the dormitories, and, in recreation time, played with the pupils with as much enjoyment as the children themselves. They worked in the garden with them, bathed with them, walked with them, and were in every respect on the friendliest terms with them. They were divided into sets, each set taking its turn every third day, for this superintendence kept them busy from morning till night. . . . The week's work was reviewed at a general meeting of the teachers every Saturday. . . ."

"When we consider the material conditions of the life of the masters in the Yverdon institute we can have no doubt either of their devotion to Pestalozzi and his work or of the lofty and disinterested motives which first attracted them to him, and then kept them with him. Their lodging was even more primitive than their living. Some of the oldest of them lived outside the castle, but the rest had not even a private room, and when they wanted to work alone, they had to construct little wooden cabins in the upper, uninhabited storeys of the round towers which crowned the four corners of the old building."

To endure such labour and conditions of labour was indeed a tribute to their own worth; and not less to the fine influence of Pestalozzi. As Dr. Biber remarks: "To render them fit and willing to fill their stations in this manner, required . . . a deep sense to be awakened within them of the exalted and responsible character of their office, and their zeal needed persevering encouragement from the highest motives. For this purpose, Pestalozzi endeavoured to make the teaching of

others a source of instruction : the government of others a means of moral improvement to themselves. On two evenings in the week he met all the teachers, except such as were at the time necessarily engaged with the pupils, in a general assembly, alternately devoted to the general means of instruction and discipline, and of the individual state of each pupil."

Another serious practical difficulty was the fact that two different languages had to be spoken. In 1809, of the pupils about sixty per cent. were Swiss, the remainder being made up of Germans, French, Russians, Italians, Spaniards, Americans and English. There were fifteen teachers, nine of whom were Swiss; and thirty-two persons who were studying Pestalozzi's method, seven of whom were natives of Switzerland. Raumer writes: "With such a medley of children, the institution was devoid of a predominant mother-tongue, and assumed the mongrel character of a border-province. Pestalozzi read the prayers every morning and evening, first in German, then in French! At the lessons in the German language, intended for German children, I found French children who did not understand the most common German word." Dr. Mayo, speaking of several Englishmen who were staying at the institute, writes: "We rise between six and seven, prayers at seven, soon after breakfast in a large room, just when we please to go there. Some of the masters drop in, in the same way, and English, French, German and Latin are perhaps all talked in succession."

Still more difficult was it to carry out a system of education based upon the principle that the pupil must be taught in such a way that at every step of his development the instruction is exactly suited to his

needs, when pupils were admitted at all ages; in all conditions of advancement; and with every variety of previous training. What the principle required was that the pupil should begin, continue and end his education under the influence of the system. It was impossible to uproot the bad habits of many years of wrong training, and begin everything afresh. The attempt to pour new wine into old bottles had its inevitable result.

Added to these obstacles to thorough and successful work were the interruptions and distractions of many visitors. Ramsauer says: "It was nothing unusual in summer for strangers to come to the castle four or five times in the same day, and for us to have to interrupt the instruction to expound the method to them". Writing from Yverdon, on 25th September, 1819, Dr. Mayo says: "We have had a great many English here lately. I spent the whole day with them, showing them the institution in the morning." These visitors included Lord and Lady Elgin and family ("a troop of Elgins"), Lady Ellenborough ("with a large party"), "an old Oxford friend," "several young men," and others. Pupils were sometimes taken to the hotel at which an important personage was staying, so that a demonstration might be given to him.

Again, it is neither unkind nor unfair to say that both Pestalozzi and his staff were somewhat overcome by the royal and exalted approval and patronage which their work received, and by the almost universal applause showered upon it. They seem almost to have thought themselves as wise and wonderful as their ignorant (educationally) and impulsive admirers deemed them; and they developed the pride which goes before a fall.

Pestalozzi himself speaks of "the great delusion under which we lay at that period, namely, that all those things in regard to which we had strong intentions and some clear ideas, were really as they ought to have been, and as we should have liked to make them. . . . We announced publicly things which we had neither the strength nor the means to accomplish. There are hundreds and hundreds of these vain boastings of which I do not like to speak."

The enemies and opponents of the work were emboldened by such confirmations of their criticisms; and the public journals in Switzerland attacked the institution. Referring to this, Pestalozzi says that the papers began "to speak decidedly against our pretensions, asserting that what we did was by no means what we considered and represented ourselves to be doing. But instead of penitently returning to modesty, we sturdily resisted this opposition. While participating in this temerity, which is now incomprehensible to me, I began to be sensible that we were treading in paths which might lead us astray, and that, in truth, many things in the midst of us were not as they should have been, and as we endeavoured to make them appear in the eyes of the world."

Pestalozzi and his staff appealed to the Swiss Diet to appoint a commission to formally examine the institution. Their request was granted and three commissioners appointed, *viz.*, M. Mérian, a member of the executive council of Basle; M. Trechsel, professor of mathematics at Bern; and Père Girard, the famous educational reformer of Fribourg. These visited the institute in November, 1809, and spent five days in examining it. They steadfastly refused to inquire into

the aims and principles of the work, and confined themselves wholly to the results produced. After their inspection they wrote a report which was presented to the Diet in 1810: a vote of thanks, on behalf of the nation, was accorded to Pestalozzi; and the report ordered to be printed. Whilst recognising many merits in the work of the institution, the commissioners pointed out many things which they thought might be improved; and, on the whole, it may be said that the work was damned with faint praise. A long and heated controversy between the opponents and friends (including the staff) of the school took place in the public journals, and by pamphlets and books, the result of which was anything but favourable to the success of the work or harmony amongst the workers.

Much light is thrown upon what we may call the domestic affairs of the institution by Ramsauer, himself a member of it. He writes: "In Burgdorf [where Ramsauer was one of the pupils] an active and entirely new life opened to me; there reigned so much love and simplicity in the institution, the life was so genial—I could almost say patriarchal; not much was learned, it is true, but Pestalozzi was the father, and the teachers were the friends of the pupils. . . . At Yverdon . . . we all felt that more must be learned than at Burgdorf; but we all fell, in consequence, into a restless pushing and driving, and the individual teachers into a scramble after distinction. Pestalozzi, indeed, remained the same noble-hearted old man, wholly forgetting himself, and living only for the welfare of others, and infusing his own spirit into the entire household. . . . So long as the institution was small, Pestalozzi could, by his thoroughly amiable personal character, adjust at once

every slight discordance, he stood in much closer relation with every individual member of the circle, and could thus observe every peculiarity of disposition, and influence it according to necessity.

“This ceased when the family life was transformed in the institution into a constitutional state existence. Now the individual was more easily lost in the crowd : thus there arose a desire, on the part of each, to make himself felt and noticed. Egotism made its appearance every day in more pointed forms. Envy and jealousy rankled in the breasts of many.”

Of these things Pestalozzi himself was not unaware. When the institution was removed from Munchen Buchsee to Yverdon, he recognised that it contained “the seeds of its own internal decay in the unequal and contradictory character of the abilities, opinions, inclinations and claims of its members ; although as yet this dissension had not done anything but declare itself general, unrestrained and fierce. . . . But the seeds of our decay had been sown, and though they were still invisible in many places, had taken deep root. . . .

“Led aside by worldly temptations and apparent good fortune from the purity, simplicity and innocence of our first endeavours, divided among ourselves in our inmost feelings, and from the first made incapable, by the heterogeneous nature of our peculiarities, of ever becoming of one mind and one heart in spirit and in truth for the attainment of our objects, we stood there outwardly united, even deceiving ourselves with respect to the real truth of our inclination to this union. And unfortunately we advanced, each one in his own manner, with firm, and at one time with rapid steps along a path which, without our being really conscious of it, separ-

ated us every day further from the possibility of our ever becoming united.”

During the year 1810 these personal differences between members of the staff, which had been growing for some time, became so acute that one of the most important of them—Schmid, the mathematical teacher and business manager—left the institute. This caused very great grief to Pestalozzi. Again also his extravagant generosity and unbusiness-like habits brought him into serious financial difficulties. By 1815 matters were so bad that the staff, in despair, invited Schmid to return. This was the beginning of the end. The domestic quarrels were soon revived, with increased bitterness; lawsuits arose, one of which lasted seven years. Krüsi, the most loyal and loving of his admirers and helpers, left the institute in 1816—writing this tender note of farewell: “Father, my time of enjoying your presence is past. I must leave your institution, as it is now conducted, if I am not for ever to lose my courage and strength to live for you and your work. For all that you were to me and all that I was able to be to you, I thank God; for all my shortcomings, I pray God and yourself to forgive me.” Niederer, the ablest of all the exponents of Pestalozzi’s views, left him in 1817. Krüsi afterwards established a private school for boys in Yverdon. Five years later a reconciliation was brought about; but the greatest possible mischief had been done to the fair fame of the institution, and public opinion and confidence had received a severe shock, in consequence of the newspaper and controversial writings connected with these quarrels.

Though such things were happening at home still Pestalozzi’s name and fame stood high in other countries,

When the allied army, violating the country's neutrality, passed through Switzerland to attack Napoleon, the castle and other buildings at Yverdon were requisitioned for military purposes. To escape this infliction two town's deputies, accompanied by Pestalozzi, were sent to ask that the town might be excused. Thanks to Pestalozzi's influence—he was “received with most extraordinary favour”—they were successful. Pupils still came to the institute from other countries.

In 1816, M. Jullien took with him twenty-four students from France; though he stayed only a year, owing, it is said, to the conduct of Schmid. Dr. Mayo took several pupils from England to Yverdon in 1819. Mr. Greaves, an Englishman who did much for the founding of infants' schools in England, joined the institute and took part in its work. It is said that about half a dozen poor children were sent from England to the school.

Neither was Pestalozzi's ever-youthful energy quenched or his hopeful spirit damped, and in 1818 he established a Poor School at Clindy, a hamlet near Yverdon. This had twelve pupils—neglected children—and was conducted on the lines of the original Poor School at Neuhof. “They were to be brought up as poor boys,” he says, “and receive that kind of instruction which is suitable for the poor, including, amongst other things, chopping wood and carting manure.” Here Pestalozzi was himself again. In a little world where he himself could be all and everything, he, though an old man of seventy-two, repeated his greatest personal success. “Old, absentminded, and incapable as he seemed in ordinary affairs, he, as though by enchantment, gained the attention and the affection of the children, and

bent them entirely to his will" (Quick, *Educational Reformers*).

The Clindy Poor School soon became famous; and in a few months there were thirty pupils. But unfortunately, as it turned out, Pestalozzi, with what he calls his "unrivalled incapacity to govern," allowed the curriculum to be more and more brought into line with that at the institute; other teachers took part in the work; paying pupils were admitted; and finally the whole character of the school changed. Schmid then persuaded him to transfer the school to the Yverdon institute.

Pestalozzi had hoped, a little later on, to take the children to Neuhof, and there re-establish for his declining years the undertaking with which he had begun his life's work. Each of the poor children had been bound over to stay in the school for five years. When this time expired not one remained. Of this he writes: "The illusion in my mind, as to the possibility of transplanting to Neuhof an establishment in Yverdon of which not an inch was in reality any longer mine, was now entirely dispelled. To resign myself to this conviction, required me to do no less than abandon all my hopes and aims in regard to this project, as for me completely unattainable. I did so at last, and on 17th March, 1824, I announced my total inability further to fulfil the expectations and hopes which I had excited, by my projected Poor School, in the hearts of so many philanthropists and friends of education."

Within a year came the last sad blow: broken by internal dissensions, and crushed by debt, the institute at Yverdon had to be closed; after having stood as the beacon light of education for more than twenty years.

And now Pestalozzi, an old man of eighty and tired of life, returns to Neuhof, where, exactly half a century before, he had started his first Poor School. Well may he exclaim: "Verily it was as if I were putting an end to my life itself by this return, so much pain did it give me".

CHAPTER VII.

THE "DEATH-SONG".

AFTER the storm and stress of, perhaps, the sternest fight that ever man fought to uplift his fellows by means of education, Pestalozzi returned to his starting place once more. Though he had in fact won a great world victory for progress, he thought he was defeated, if not disgraced. Even so his noble soul and ardent mind would not be stilled. Once more he takes up his pen to tell the truth, as he sees it, of his life and work ; and to deliver yet again the message he bears. Now, as ever, he does not spare himself, but freely and frankly admits his many faults and failures : all he asks is that the truth that is in him and his work shall be properly recognised and appreciated.

No sooner did he arrive again at Neuhof than he began to write his *Swan's Song* (or *Death-Song*). In this he gives a final statement of his views on education. He also wrote *My Fortunes as Superintendent of my Educational Establishments at Burgdorf and Yverdon* ; wherein he gives his own account of the happenings at these places, and tries to show that Schmid was his true friend and saviour. Whilst these writings are, as would be expected, full of sadness and despondency,

they are by no means the morbid meanderings of age and decay. De Guimps speaks of the *Swan's Song* as "one of his most remarkable works"; and Raumer, who was well qualified to judge, says: "These last writings of Pestalozzi have been regarded by many as the melancholy and languid outpourings of the heart of a dying old man. As far as concerns the old man's judgments on the institution, as it was at the time of my stay at Yverdon, I consider them for the most part highly truthful, and as affording evidence that he was not deficient in manly clearness and penetration even in his old age."

But these two works are but a fraction of his undertakings in his last days. Being short of means, he proposed to raise money by publishing editions of his work in English and in French. So Schmid was sent to Paris and London to get subscribers and arrange, if possible, for the publication of his works; and even for a new periodical in French. All this with a view to carrying out his ever-cherished plan of a Poor School at Neuhof. After fifty years' absence from Neuhof, one of the first things he did on his return to it was to give orders for the buildings for a Poor School. Whilst these orders were being carried out, much too slowly for his burning zeal, he constantly went and taught in the village school at Birr; and once more interested himself in the affairs of his old friends amongst the peasants.

Of his personal appearance at this time we have an account by Henning—one of his "old boys"—who visited him at Neuhof, in August, 1825. He says: "I had not seen him for thirteen years, and found him

looking older certainly, but on the whole very little changed. He was still active and strong, simple and open; his face still wore the same kindly, plaintive expression; his zeal for human happiness, and especially for the education of poor and little children, was as keen as thirteen years before. . . . In spite of the heat he accompanied me to Lenzburg, and valiantly mounted the two or three hundred steps leading to the castle. . . . The vivacity of his speech and the vigour of all his movements inspired me with the hope that the term of his earthly existence was still far off. My heart was full when I took leave of the kind old man. I shall never forget the time that it was my good fortune to spend with him."

For a meeting of the Helvetic Society—of which he had been enthusiastically elected president the previous year—in April, 1826, at Schinznach, he wrote an address *On Fatherland and Education*. In November of the same year he was present at a meeting of the Society for the Promotion of Education, of Brugg, for which he had written a paper entitled *Attempt at a Sketch on the Essence of the Idea of Elementary Education*, and dealing with the simplest means of educating children from the cradle to the sixth year, in the domestic circle. The paper was read for him by the pastor of Birr; but afterwards Pestalozzi spoke with all his old vigour and passionate zeal for the education of the little ones.

In July, 1826, Pestalozzi and Schmid visited Zeller's school for orphans, at Beuggen, where a touching festival was arranged in his honour. The children received him with singing; and he was then offered an

WANDERER'S EVENING PRAYER.

GOETHE (1749-1832).

Very slowly.

Thou that art in high-est skies, Ev'-ry pain and sor-row

still-ing; Those whom dou-ble an-guish tries, Dou-bly

with Thy sweet-ness fill-ing: Why with pain and plea-sure

dri-ven, Are we wea-ry, lost to rest? Peace of

hea-ven, Come, oh, come, with-in each breast.

oak wreath, which, however, he would not accept, saying, while tears were in his eyes: "Not to me, but to innocence, belongs this wreath". Most appropriately—for it appeared in his first book, *Leonard and Gertrude*—and most pathetically so—for it spoke of peace and rest after storm and strife—one hymn sung by the children was Goethe's "Wanderer's Evening Prayer". This deeply affected Pestalozzi.

Beside all these activities he was working at an additional volume (the fifth) of *Leonard and Gertrude*; a new *Manual for Mothers*, in which he gave them instructions for educating a child up to its seventh year—a supplement to his *Book for Mothers*; and a book of elementary exercises designed to teach children Latin in the same way as they learn their mother-tongue.

Soon, and in strife, the end was to come: and terribly sad was the closing scene. Pestalozzi's *My Fortunes*, etc., gave rise to much newspaper correspondence; and it contained statements which, in defending Schmid, caused great pain to Niederer. A friend of Niederer published a pamphlet in defence of him. Pestalozzi had taken no notice of the newspaper correspondence, but when he saw in a Zurich paper a notice of the pamphlet, with the remark: "It seems that Pestalozzi is like certain animals who hide at sight of the stick; otherwise he would reply to these attacks," he was seized with a most violent outburst of indignation, and exclaimed: "I can bear this no longer". He became quite ill, and said to his doctor: "I feel that I am going to die; but I must live six weeks longer to answer these terrible calumnies". In spite of his condition—he suffered also from an organic com-

plaint—and his doctor's orders he insisted upon writing, whenever he could, till the pen dropped from his hands. So serious became his state that the doctor ordered his removal to Brugg so that he might be near him.

On the 15th of February, 1827, when deep snow covered the ground the poor old man was taken, well wrapped up and in a closed sledge, to a room in Brugg. The next day he had a violent attack of pain, became delirious, and was unconscious for some time. He was unable to speak after noon. Very early the next morning he regained consciousness, and seemed easy and composed. He helped to arrange his bed and talked to those about him for nearly an hour. Amongst his last words were these: "My children, you cannot carry out my work, but you can do good to those about you; you can give land to the poor to cultivate. As for me I am soon to read the book of truth. I forgive my enemies; may they find peace, even as I am now about to find the peace which is eternal. I should have been glad to live six weeks longer to finish my writing, and yet I thank God for taking me away from this earthly life. You, my children, remain quietly at Neuhof, and look for your happiness in your home." About seven o'clock in the morning he quietly passed away with a smile on his lips.

When asked what sort of a monument he would like he had said "a rough unhewn stone, such as I myself have always been". Nearly twenty years after his death, in a niche in the church wall above his grave, was placed a bust of him, and this epitaph:—

Here rests

HENRY PESTALOZZI;

Born at Zurich on the 12th of January, 1746,

Died at Brugg on the 17th of February, 1827.

Saviour of the poor at Neuhof,

Preacher to the people in *Leonard and Gertrude*,

Father of the orphans at Stanz,

Founder of the new folkschool

in Burgdorf and Munchenbuchsee,

Educator of Humanity at Yverdon.

Man, Christian, Citizen.

Everything for others, nothing for himself!

Blessings on his name!

TO OUR FATHER PESTALOZZI.

Grateful Aargau.

CHAPTER VIII.

PESTALOZZI THE MAN.

CARLYLE has finely said: "The history of what man has accomplished in this world, is at bottom the history of the Great Men who have worked here. They were the leaders of men, these great ones; the modellers, patterns, and in a wide sense creators, of whatsoever the general mass of men contrived to do or to attain; all things that we see standing accomplished in the world are properly the outer material result, the practical realisation and embodiment, of thoughts that dwelt in the Great Men sent into the world. . . . We cannot look, however imperfectly, upon a great man, without gaining something by him. He is the living light-fountain, which it is good and pleasant to be near. The light which enlightens, which has enlightened the darkness of the world; and this not as a kindled lamp only, but rather as a natural luminary shining by the gift of Heaven; a flowing light-fountain, as I say, of original insight, of manhood and heroic nobleness. I should say *sincerity*, a deep, great, genuine sincerity, is the first characteristic of all men in any way heroic. . . . A breaker of idols. . . . It is the property of every Hero, in every time, in every place and situation, that he come back to reality; that he stand upon things, and not shows of things" (*On Heroes and Hero-worship*).

We have already seen enough of his life to judge whether Pestalozzi has any claims to be accounted a hero of this sort. Let us never cease to remember that it is the elements of greatness in a man which most matter, and not the weaknesses which accompany them, or the mistakes made in giving expression to them; so long as the greatness prevails. 'Twere better to have been one-thousandth part as good as Pestalozzi, than a thousand times better than the critic who thinks Pestalozzi could not have been a great man, because he made many and great mistakes. There is not one of the conditions of greatness which Carlyle lays down which Pestalozzi does not more or less fulfil. We, therefore, acclaim him a Great Man, a Hero.

Let those who knew him bear witness to the manner of man he was, as to his virtues. Buss, one of his earliest and faithful helpers, says: "there was in his expression something so great, that I viewed him with astonishment and veneration. This, then, was Pestalozzi? His benevolence, the cordial reception he gave to me, a perfect stranger, his unpretending simplicity, and the dilapidated condition in which he stood before me; the whole man, taken together, impressed me most powerfully. I was his in one instant. No man had ever so sought my heart; but none, likewise, has ever so fully won my confidence." Karl Ritter (the famous geographer), one of Pestalozzi's teacher-pupils, says: "I have seen more than the Paradise of Switzerland, for I have seen Pestalozzi, and recognised how great his heart is, and how great his genius; never have I been so filled with a sense of the sacredness of my vocation and the dignity of human nature as in the days I spent with this noble man". Another pupil,

Professor Vulliemin, writes: "We all loved him, for he loved us all; we loved him so warmly that when some time passed without our seeing him, we were quite troubled about it, and when he again appeared we could not take our eyes off him . . . him whom we used to call our Father Pestalozzi". Yet another writes: "I seem still to see this kind old man . . . with such a quick, tender glance in his eyes, and such a kind smile upon his lips, that everybody felt attracted to him, men, women and children gladly accepting his affectionate embraces".

He was a man full of the most devoted affection and kindness. Ramsauer tells us that when he was ill "Pestalozzi reproached himself with being the cause; he knew he had worked me too much, and was anxious to nurse me himself, as a father would nurse his child". Dr. Mayo describes how, when he was ill, Pestalozzi was terribly uneasy; he could not rest till the symptoms declared themselves more favourable. He said: 'J'ai en crainte, comme un pauvre diable'. He comes early in the morning to my bedside; kisses my hand when I place it in his; and when I tell him I am better, he is quite delighted and exclaims 'Grâces à Dieu, Grâces à Dieu!'"

Two or three incidents of his life throw interesting side-lights on his character. One day some of Fellenberg's workmen brought to him a disreputable-looking, raggedly clothed man, whom they had found lying in a field, half dead with hunger and fatigue. The man turned out to be Pestalozzi, who, in his enthusiasm for collecting minerals, had wandered so far from home, and so loaded his pockets and handkerchief with his captures, that he had become exhausted, had lost his

way, and finally collapsed beside a ditch. On another occasion, when on a similar errand, he was seen by a policeman wearily dragging himself along towards the gates of Soleure, at evening. Taking him to be a beggar, and suspicious of the character of such a ragged and unkempt person, the policeman took him to the magistrate's house. Here he had to wait a long time, for the magistrate was out. To the amazement of the policeman the magistrate recognised Pestalozzi, cordially greeted him and invited him to supper.

When he went with the deputation from Yverdon to petition the allied sovereigns not to use the town's buildings as hospital, he used the occasion for advocating his system. Finding himself in the presence of the Czar and so many high officials, he at once began to address them on the education of the poor, and the liberation of the serfs. So absorbed was he in this task that he pressed upon the Emperor until the latter was driven into a corner of the room, and Pestalozzi was on the point of actually button-holing him, when he suddenly remembered himself. Confusedly muttering an apology he attempted to kiss the Emperor's hand, but Alexander graciously embraced him.

On one occasion he determined, though very ill at the time, to call on the King of Prussia (who was visiting Neuchâtel), to thank him for sending so many teacher-students to Yverdon. Ramsauer went with him, and relates that: "During the journey Pestalozzi had several fainting fits, so that I was obliged to take him from the carriage and carry him into a neighbouring house. I constantly urged him to return home. 'Hold your tongue,' he said; 'I must see the king even though it should cost me my life. If I can bring about a better

education for a single Prussian child, I shall be fully rewarded.' ”

Once when he was ill in bed with a sharp attack of rheumatism, the French Ambassador, Reinhardt, called to see the institute at Burgdorf. Neither doctor nor friends could persuade Pestalozzi to stay in bed. With great difficulty, and much pain to himself, he was dressed and almost carried from his room. No sooner did he see the ambassador than he freed himself from his supporters, and began earnestly to expound his educational views to his visitor. The longer he talked, the more vigorous and active he became; so much so that when he made an end of speaking, he had also made an end of his rheumatism.

Dr. Mayo tells how, just before completing his seventy-fifth year: “A girl belonging to his poor school [Clindy] having died a few days ago, he attended her funeral, leading the procession bare-headed, though the snow was on the ground ”.

So much as to the goodness of his heart and will; and now we will give some evidence about his intellectual powers and general character. Baron de Guimps says of Pestalozzi (at Yverdon): “He accosted everybody with gentle kindness. His conversation was animated and clever, full of imagination and originality, but difficult to follow on account of his pronunciation. But he was never long the same, passing in a moment from frank, open-hearted gaiety to profound and even melancholy meditation. Always absent-minded and preoccupied, he was a prey to a feverish restlessness, and could never sit down for long together; he used to walk up and down the corridors of the castle, one hand behind his back, or in the breast of his coat. . . . He

continued to work with indefatigable zeal at improving his 'method,' and making new applications of it. Every morning, as early as two o'clock, he called an under-master to his bedside to write from his dictation. But he was rarely satisfied with his own work, and made continual corrections, often starting afresh."

Ramsauer speaks thus of him: "On those occasions [when members of the staff took coffee with him in Mrs. Pestalozzi's room] he was generally very gay and full of wit; and his wit was often brilliant, for whatever he did, he did thoroughly, giving himself up entirely to the feelings of the moment. In the same half-hour he would be extremely happy and extremely miserable, gentle and caressing or serious and severe; he did nothing without enthusiasm."

This violent instability is shown in an incident related by De Guimps. "Pestalozzi was strangely impressionable, and when once possessed by his favourite idea of elevating the lower classes, he forgot everything else. Some short time after the death of his wife [which caused him the most profound grief and distress], one of his old pupils, deeply moved by his loss, came to see him. After a few words on the painful subject of the visit, the old man began to speak of his new plans and new hopes for the success of his method, and before long, carried away by his illusions and enthusiasm, he cried excitedly: 'I am swimming in a sea of joy!'"

Professor Vulliemin writes: "He is quick in grasping principles, but is helpless in matters of detail; he possesses the faculty, however, of putting his views with such force and clearness that he has no difficulty in getting them carried out. . . . He has no gift for guiding this great undertaking [Yverdon], and yet it con-

tinues. . . . Even his speech, which is neither German nor French, is scarcely intelligible, and yet in everything he is the soul of this vast establishment. All his words, and more especially his religious utterances, sink deep into the hearts of his pupils, who love and venerate him as a father."

Of his manner of expounding his theories De Guimps says: "A hundred times have I heard the master himself explain his doctrine, and each time with a different illustration. This profound philosopher had no love for philosophical language, with which he had never been familiar. Nor would he trust himself to use formulas, of which indeed he had almost a dread. His thought, which had been shaped in solitude and with no help from books, was simply the outcome of observation and reflection, and so he preferred to explain his views as he had formed them, and attached much more weight to concrete facts, particular examples, and comparisons, than to abstractions and general ideas."

Dr. Biber's description is: "Pestalozzi was naturally endowed with extraordinary powers of body and mind. . . . His eye beaming with benevolence and honest confidence, soon dispelled any unpleasant impressions which the ruggedness of his appearance was calculated to produce; while his wrinkled countenance, which attested in every feature the existence of a soul, to whom life had been more than a thoughtless game, commanded, with irresistible power, that reverence which his figure could never have imposed. . . . His temper was cheerful; his wit ready and pointed, but without sting. His conversation was at all times animated, but most so when he entered into explanations of his views; his lively gesticulation was then called in to assist his utter-

ance, especially when he spoke French, which not being familiar to him, he was constantly tormented by a vague consciousness of the inadequacy of his expressions to the ideas which he had in mind. Such was the affability of his manner that it was impossible long to feel a stranger in his presence, while the native dignity diffused over his whole being, kept even the indiscreet at a respectful distance.

“ He was an affectionate husband and a kind father. The privations to which his enterprising spirit, and his unbusiness-like habits exposed his family, cost him many a pang ; and much of the gloom and bitterness which assailed him at different periods, especially towards the close of his life, is to be attributed to the struggle of his domestic affections against the generous disinterestedness of his public character. . . . The relation in which Pestalozzi’s character was most fully developed, and appears to the greatest advantage, is that in which he stood, in the most flourishing times of the institution at Yverdon, to the whole family as their adoptive father, and to his earliest disciples as their paternal friend.”

M. Charles Monnard says of his intellectual power : “ Instead of the usual knowledge that any young man of ordinary talent can acquire in two years, he understood thoroughly what most masters were entirely ignorant of : the mind of man and the laws of its development, human affections and the art of arousing and ennobling them. He seemed to have almost an intuitive insight into the development of human nature, which indeed he was never tired of contemplating.”

An almost ridiculous example of this combination of deep insight and high purpose with profound ignorance is given by Ramsauer, in connection with Pestalozzi’s

enthusiasm for collecting stones. "Every fine day he went to hunt for stones, which was his chief diversion. I, too, had to pick up stones, although it seemed very singular to me, for there were millions of them and I did not know which to take. He did not understand anything about them either, but he filled his pockets and his handkerchief with them every day all the same, and carried them home, though he never looked at them again after that. He kept this hobby all his life; and it was hard to find a handkerchief in the whole school of Burgdorf which was not full of holes made by taking pebbles home." But there was a great educational principle involved, and out of such seemingly stupid actions grew what we now know as nature study, school journeys, and object lessons.

Raumer says that "Niederer saw in Pestalozzi a man who had grasped with instinctive profundity the subject of human culture, but had given only a fragmentary view of it, and who could not control ideas which, as it were, possessed him". Niederer himself says: "In Pestalozzi there was as much of the woman as of the man". There is much truth in Niederer's views.

And now let us consider—for purposes of proper criticism (of his work)—some of his weaknesses and failings. Here we shall find much that needs careful consideration. We must endeavour to see the man as a whole, and to see him sanely; neither lost to his weaknesses because of our admiration of his greatnesses, nor blind to his supreme abilities because of his great failings. If we would see the pure jewel we must clear away the dross. We shall try to recognise his faults fully, only that thereby we may see his virtues

still more fully: we seek but to separate the chaff from the wheat.

No one was more conscious of Pestalozzi's faults than Pestalozzi himself. From first to last he confesses and deplures them. Of his first failures, at Neuhof, he declares: "The cause of the failure of my undertaking lay essentially and exclusively in myself, and in my pronounced incapacity for every kind of undertaking what requires eminent practical ability. . . . So great, so unspeakably great, was the contrast between what I wished to do and what I did and was able to do, which arose from the disproportion between my good-natured zeal, on the one side, and my mental impotency and unskilfulness in the affairs of life on the other."

Writing to his fiancée, between 1767-69, he says: "Those of my faults which appear to me the most important, in relation to the situation in which I may be placed in after-life, are improvidence, incautiousness, and a want of presence of mind to meet unexpected changes in my future prospects, whenever they may occur. . . . I have other faults, arising from my irritability and sensitiveness, which oftentimes will not submit to my judgment. I very frequently allow myself to run into excesses in praising and blaming, in my likings and dislikings; I cleave so strongly to many things which I possess, that the force with which I feel myself bound to them often exceeds the limits which reason assigns; whenever my country or my friend is unhappy, I am myself unhappy. . . . Of my great, and indeed very reprehensible, negligence in all matters of etiquette, and generally in all matters which are not in themselves of importance, I need not speak; any one may see them at first sight of me."

Such a confession is in itself a sign of greatness, for it was done at a great price, under the fear of a still greater: "I love you so truly from my heart, and with such fervour, that this step has cost me much; I fear to lose you, dear, when you see me as I am; I had often determined to be silent; at last I have conquered myself". True self-criticism is the highest form of judgment; and few men are able thus to analyse their own nature, and fewer still have the noble courage and candour for such a confession.

Again, he says of his work at Burgdorf—in many ways the most successful of all his school-work: "I must say here openly what, during my years of misfortune, I have often and often said secretly to myself, that at the very first step I took in Burgdorf Castle I was lost. I was indeed embarking on a career that could only end in misfortune, seeing that the post I was to occupy demanded the very strength and administrative talents I so terribly lacked." Of the institute at Yverdon he most modestly, yet truly said, to Professor Vulliemin: "I cannot say that it is I who have created what you see before you. Niederer, Krüsi and Schmid would laugh at me if I called myself their master; I am good neither at figures nor writing; I know nothing about grammar, mathematics, or any other science; the most ignorant of our pupils know more of these things than I do; I am but the *initiator* of the institute, and depend on others to carry out my views."

Professor Vulliemin rightly adds: "He spoke the truth, and yet without him nothing that is here would exist". Yes, though he was not their master, yet he was their Master: he knew much of the soul of knowledge though little of its forms. He saw clearly, but he

could not express clearly and cogently. As he says in *How Gertrude Teaches her Children*: "My dear friend, if you find that I do not succeed in explaining the theory of my plans, I hope you will take the will for the deed, seeing what pains I am taking. Ever since the age of twenty I have been completely unfitted for systematic metaphysics; and fortunately for me, the practical success of my plan does not depend upon this sort of philosophy, which seems to me so toilsome." And yet though this is true, it is also true that he wrote as only a man of genius can write, and was recognised by the most intellectual men of his day and generation as one of themselves. But he lacked power and thoroughness as a systematic, or scientific, thinker and writer. Like most of the great pioneers he did not construct an elaborate and finished system, but set forth, or rather revealed, some of the great truths and principles which must underlie such a system.

Froebel, who spent more than a year with Pestalozzi at Yverdon, thus speaks of him and his work: "That Pestalozzi was carried away and bewildered by this great intellectual machine of his appears from the fact that he could never give any definite account of his idea, his plan, his intention. He always said, 'Go and see for yourself' (very good for him who knew *how* to look, how to hear, how to perceive); 'it works splendidly!' It was at that time, indeed, surprising and inexplicable to me that Pestalozzi's loving character did not win every one's heart as it won mine, and compel the staff of teachers to draw together into a connected whole, penetrated with life and intellectual strength in every part. His morning and evening addresses were deeply touching in their simplicity. . . .

“The powerful, indefinable, stirring and uplifting effect produced by Pestalozzi when he spoke, set one’s soul on fire for a higher, nobler life, although he had not made clear or sure the exact way towards it, nor indicated the means whereby to attain it. . . . I soon saw that much was imperfect ; but, notwithstanding this, the activity which pressed forth on all sides, the vigorous effort, the spiritual endeavour of life around me, which carried me away with it as it did all other men who came within its influence, convinced me that here I should presently be able to resolve all my difficulties.”

This inability on the part of Pestalozzi to follow his ideas and plans to successful issues was pointed out to Pestalozzi himself by his friend Lavater, who said to him : “When I only see a line of yours without a mistake, I will believe you capable of much, very much, that you would like to be”. To Pestalozzi’s wife Lavater once said : “If I were a prince, I would consult Pestalozzi in everything that concerns the people and the improvement of their condition, but I would never trust him with a farthing of money”.

Often too the enthusiasm of his hopes, the intensity of his desires, and the overwhelming conviction of the rightness and righteousness of his work, seem to have so prejudiced his calmer and clearer judgment that he believed the facts to be other than they were ; and even went so far as to arrange things so that other people should be led to see only the greatest successes of his work. Ramsauer says : “As many hundred times in the course of the year as foreigners visited the Pestalozzi institution, so many hundred times did Pestalozzi allow himself, in his enthusiasm, to be deceived by them, On the arrival of every fresh visitor, he would

go to the teachers in whom he placed most confidence and say to them: 'This is an important personage, who wants to become acquainted with all we are doing. Take your best pupils and their analysis-books (copy-books in which the lessons were written out) and show him what we can do and what we wish to do'. Hundreds and hundreds of times there came to the institution silly, curious and often totally uneducated persons, who came because it was the 'fashion'. On their account, we usually had to interrupt the class instruction and hold a kind of examination. . . .

"In 1814, the aged Prince Esterhazy came. Pestalozzi ran all over the house, calling out: 'Ramsauer, Ramsauer, where are you? Come directly with your best pupils to the *Maison Rouge* (the hotel where the Prince was). He is a person of the highest importance and of infinite wealth; he has thousands of bond-slaves in Hungary and Austria. He is certain to build schools and set free his slaves, if he is made to take an interest in the matter.' I took about fifteen pupils to the hotel. Pestalozzi introduced me to the Prince with these words: 'This is the teacher of these scholars, a young man who fifteen years ago migrated with other poor children from the canton of Appenzell and came to me. But he received an elementary education, according to his individual aptitudes, without let or hindrance. Now he is himself a teacher. Thus you see that there is as much ability in the poor as in the richest, frequently more; but in the former it is seldom developed, and even then not methodically. It is for this reason that the improvement of the people's schools is so highly important. But he will show you everything we do better than I could. I will, therefore, leave you for the present.'

“ I now examined the pupils, taught, explained and bawled, in my zeal, till I was quite hoarse, believing that the Prince was thoroughly convinced about everything. At the end of an hour Pestalozzi returned. The Prince expressed his pleasure at what he had seen. He then took leave, and Pestalozzi, standing on the steps of the hotel, said: ‘ He is quite convinced, quite convinced, and will certainly establish schools on his Hungarian estates ’.

“ When we had descended the stairs, Pestalozzi said: ‘ Whatever ails my arm? It is so painful. Why, see! it is quite swollen; I can’t bend it!’ And in truth his wide sleeve was now too small for his arm. I looked at the key of the house-door of the *Maison Rouge* and said to Pestalozzi: ‘ Look here; you struck yourself against this key when we were going to the Prince an hour ago ’. On closer observation it appeared that Pestalozzi had actually bent the key by hitting his elbow against it. In the first hour afterwards he had not noticed the pain, for the excess of his zeal and his joy.”

It is impossible to deny that, though due to the best possible motives, there is much that is misleading and mistaken in such methods of self-advertisement. They savour too much of “ tricks of the trade ”. It is to such exhibitions that Professor Vulliemin refers as “ charlatanism ” (see p. 97). Although Pestalozzi did such things in the excitement of the moment, so to say, yet in his calmer moods he recognised that he had misrepresented matters; frankly confessed his fault, and corrected his misrepresentations. A good example of this is seen in connection with the *Report to Parents* which was published as a reply to the attacks on the institute at Yverdon. In this everything and everybody

are spoken of as though all was perfection and delight. Afterwards Pestalozzi admitted that "what is here said . . . is altogether a consequence of the great delusion under which we lay at that period, namely, that all those things in regard to which we had strong intentions and some clear ideas, were really as they ought to have been, and as we should have liked to make them. . . . Neither did we perceive the weeds at that time; indeed, as we then lived, thought, acted and dreamt, it was impossible that we should perceive them."

On this element in Pestalozzi's character Raumer remarks: "The source of the internal contradiction which runs through the life of Pestalozzi was, as we saw from his own confessions, the fact that, in spite of his grand ideal, which comprehended the whole human race, he did not possess the ability and skill requisite for conducting the smallest village school. His highly active imagination led him to consider and describe as actually existing in the institution whatever he hoped sooner or later to see realised. His hopeful spirit foresaw future development in what was already accomplished, and expected that others would benevolently do the same. This bold assumption had an effect on many, especially on the teachers of the institution. This appears to explain how, in the report on the institution, so much could be said *bonâ fide* which a sober spectator was bound to pronounce untrue.

"But this self-delusion is never of long duration; the period of overstrung enthusiasm is followed by one of hopelessness and dejection. The heart of man is indeed an alternately proud and dejected thing! Such an ebb and flow of lofty enthusiasm and utter despair pervades the entire life of Pestalozzi."

It would almost seem that Pestalozzi's personal neglect and disorder was a reflection of the want of order and finish in the affairs of his mind. There is no doubt that the former was very marked. Raumer thus speaks of his first sight of Pestalozzi: "He was dressed in the most negligent manner: he had on an old grey overcoat, no waistcoat, a pair of breeches, and stockings hanging down over his slippers; his coarse bushy black hair uncombed and frightful. His brow was deeply furrowed, his dark brown eyes were now soft and mild, now full of fire. You hardly noticed that the old man, so full of geniality, was ugly; you read in his singular features long continued suffering and great hopes."

Ramsauer in describing his first day and lesson in the school at Burgdorf tells how Pestalozzi "kept on reading out sentences without halting for a moment. As I did not understand a bit of what was going on, when I heard the word 'monkey, monkey,' come every time at the end of a sentence, and as Pestalozzi, who was very ugly, ran about the room as if he was wild, without a coat, and without a neck-cloth, his long shirt-sleeves hanging down over his arms and hands, which swung negligently about, I was seized with real terror, and might soon have believed that he himself was a monkey."

Professor Vulliemin thus describes him: "Imagine . . . a very ugly man with rough bristling hair, his face scarred with small-pox and covered with freckles, an untidy beard, no neck-tie, his breeches not properly buttoned and coming down to his stockings, which in their turn descended on to his great thick shoes; fancy him panting and jerking as he walked". Buss speaks of "his stockings hanging down about his heels, and

his coat covered with dust. His whole appearance was so miserable that I was inclined to pity him."

Though affectionate and ordinarily of a genial and cheerful temper he was at times uncertain and violent. Ramsauer states that "often when the masters had done something to displease him, Pestalozzi would fly into a passion and angrily leave the room, slamming the door as if he would break it. But if at that moment he happened to meet a young pupil, he would instantly grow calm, and after kissing the boy, return to the room, exclaiming: 'I beg your pardon! Forgive my violence! I was mad!'" Baron de Guimps writes: "He used to appear every day in the middle of the lessons. If the teaching satisfied him his face would become radiant with pleasure, he would caress the children and say a few pleasant words to them; but if, on the other hand, he was not satisfied he would angrily leave the room at once, slamming the door behind him."

M. Soyaux says of Pestalozzi: "It was only necessary to see this man to have the best opinion of him; he is always in deep thought: he discovers more in himself than from the outside world, more in the world of thought than in the world of things. A spirit of ceaseless activity, an inner impetus, sometimes drives him from one room to another, from one colleague to another. . . . Sometimes he passes whole days in his own room, and spends his time in meditation and writing, wholly forgetful of his person and his affairs. One can begin a conversation with him easily enough, but it is not often that one can keep him to one subject, and get him to discuss it thoroughly. He merely breaks the current of his own thoughts for a few minutes, says

a few friendly words, and then draws back into his shell.

“When, however, one can get him to notice well-grounded objections and doubts he becomes keen and talkative. He speaks fluently and to the point, in an energetic and definite way. Contradiction does not irritate him, and has seldom any effect other than making him more convinced than ever of the rightness of his opinions. His heart is most affectionate and friendly. . . . He shrinks from no sacrifice if the end is good and noble. He carries his forgetfulness of his own and his family’s interests too far—he takes in too many pupils free of charge.

“The firmness and independence of his mind show themselves in his personal appearance. . . . Unused to the usages of European society, he freely follows the natural impulses of his heart and mind. He is quiet, sincere, earnest, modestly firm, lively without being carried away by physical impulses, sympathetically attentive, but lacking in refinement because uninfluenced in his words and actions by outside opinions. As he has not been educated by men, he does not know how to exert an active influence on them. He is a thinker rather than an educator.”

We will take one more glimpse of the whole man, and this through the eyes of Dr. Mayo—an English clergyman who was chaplain to the English children at Yverdon—who was three years at the institute on terms of intimacy and confidence with Pestalozzi, and thus writes of him in a private letter to a friend: “Pestalozzi completes this day his seventy-sixth year. His grey hair, his careworn countenance, his hollow eye, and bent figure proclaim that many days, and those days of trouble,

have passed over his head. His heart, however, seems still young; the same warm and active benevolence, the same unconquerable hope, the same undoubting confidence, the same generous self-abandonment animate it now, that have led to the many sacrifices and have supported him under the many difficulties and trials of his eventful life.

“In a thousand little traits of character, which unconsciously escape him, I read the confirmation of his history. It is an affecting sight, when the venerable object of the admiration of emperors and princes appears in the midst of his adopted children. Rich and poor, natives and foreigners share alike his paternal caress, and regard him with the same fearless attachment. From the sacrifice of time, property and health, for the benefit of a people who knew not how to value his merit, to the picking up a child’s plaything, or the soothing of an infant’s sorrow, Pestalozzi is ever prompt to obey the call of humanity and kindness. The sentiment of love reigns so powerfully in his heart, that acts of the highest benevolence, or of the most condescending good nature seem to require no effort, but appear the spontaneous manifestation of one over-ruling principle. . . .

“Though honoured with the most flattering testimonies of esteem and approbation by courts and universities, Pestalozzi is the most modest and unassuming of men. To all who take an interest in his method of education he addresses himself in the most touching expressions of gratitude, as if they conferred the greatest obligation by examining into the truth of his opinions and the utility of his plans. . . . ‘Examine my method; adopt what you find to be good and reject what you

cannot approve. We are doing something here towards the execution of my principles of education, but what we do is still very imperfect.' . . .

“ You cannot conceive the interest which Pestalozzi awakens or the influence which he insensibly acquires. All the little barriers, behind which reserve or suspicion teach us to entrench ourselves, fall before the child-like simplicity, the unaffected humility and feminine tenderness of his heart. Self-interest is shamed into silence, while we listen to the aspirations of his boundless benevolence ; and if one spark of generous feeling glows in the bosom, the elevated enthusiasm of his character must blow it into a flame. The powers of his original mind serve to maintain the interest which his character first excites. In conversation, however, he is most frequently a listener. Towards those with whom he lives in perfect intimacy he sometimes indulges in a playful but forcible raillery ; careful meanwhile to avoid giving the slightest pain or uneasiness. He is peculiarly successful in portraying some great character by two or three masterly strokes ; in marking either in retrospect, or by anticipation, the influence of political events on national character, or national prosperity ; in characterising the different methods of education in vogue ; or in tracing the difference between his views and those of certain philosophers with which they have been confounded.

“ There is nothing studied about him. Often as I have heard him enter on the subject of his system for the information of strangers, I do not recollect him to have taken it up twice from the same point of view. When we have conversed on these subjects, I have sometimes thought his ideas wild and his views im-

practicable. The faint and misty but still beautiful light which emanated from his mind I have regarded with a feeling of melancholy delight, for it seemed to indicate that the sun of his genius had set. Still, I have been unable to dismiss from my mind his loose and ill-digested hints. After frequent reconsideration of them they have appeared more clear and more feasible; and I have subsequently traced their influence on the opinions I have adopted and on the plans of instruction which I have pursued.

"Pestalozzi once known is never forgotten. I have talked with men who have not seen him for years, or whom the current of events has separated from all intercourse with him. His honoured image lives as fresh in their memory as if their communication had never been suspended or broken. Anecdotes illustrating his benevolence are current in their families, and their children anticipate the delight of one day receiving the parental caress of good Father Pestalozzi. Many of my own countrymen who have enjoyed the privilege of his society will, I am sure, carry the remembrance of him to their graves."

CHAPTER IX.

PESTALOZZI THE THINKER.

STARTING with the fact that Pestalozzi was gifted with a mind which by its native power could pierce more deeply, fully and independently into the inner meaning and significance of things and ideas than the minds of other men—in a word, that he was a genius—we can usefully consider the influences which helped to develop his mind in the direction which it actually took, and the work it did. There is not the least doubt but that the influence of his mother, and the fact that he was entirely under the influence of women during his early years, had a very important and abiding effect upon him. Again, his own wife, and the faithful and devoted Elizabeth Naef, were the only persons who really believed in and supported him in his most terrible time of failure and want at Neuhof. No wonder, therefore, that Elizabeth was immortalised as Gertrude; and that the woman and the mother are regarded by Pestalozzi as the very corner-stone of education and the foundations of society. Education must be based upon the mother's influence and work; and, hence, it must be domestic and industrial in the earliest stages.

His own reading and study at school and college would bring him into touch with at least some of the ideas of the great classical writers on education and

government. In his work *On the Idea of Elementary Education* he discusses the Greek ideal of education, pointing out that the Greeks based their system on the idea of developing the human faculties by human activities rather than knowledge giving; that they gave general education before special training for work; and that their method of intellectual education is the most perfect model ever given to the world. In *How Gertrude Teaches her Children* he deals with the Socratic method of teaching, which he considers unsuitable for very young children, because it makes too great demands on the reasoning powers. In his study of law and politics he would deal more especially with principles of government, which would necessarily involve some consideration of systems of education. This was especially likely to be the case under such a man as Professor Bodmer, one of the ablest men of his day and a foremost reformer.

We have already seen his own statement of the influence of Rousseau's works on his mind and heart. His whole conception of education was very largely and deeply influenced, and probably moulded, by Rousseau's views. It is more than likely that in the course of his reading he would become acquainted with the ideas, if not the writings, of Locke and Hobbes. His *Inquiry into the Course of Nature in the development of the Human Race* seems to suggest this very clearly and strongly. The essays in which he and his fellow collegians shared at the meetings of the *Helvetic Society* would all help in this direction, for Professor Bodmer was the founder of it, and the subjects dealt with were history, education, politics and ethics. The national work done by this society would, of course, be well known to

Pestalozzi, and would in some measure guide and form his ideas on education.

Pestalozzi was a truly scientific thinker and worker, to a considerable extent; not in a strict, systematic and thorough way, but in that he made a very considerable use of real observation and experiment—as far as his wayward nature would allow. He might almost be said to be the first who began Child-Study, from the educational point of view. His very first attempts at practical teaching were made, as we have seen, in the upbringing of his own son. To further illustrate this we will give one or two more extracts from the diary in which he records his efforts, results and reflections—so extremely interesting and instructive: “When the child knows the signs [names] before learning to know the things they represent, and especially when he connects wrong ideas with them, our daily lessons and conversation only strengthen and increase his mistakes, and force him still further along the path of error without our even suspecting it. . . .

“In the matter of education I am generally very eager to get to know the ideas of those who have been brought up quite naturally and without restraint: who have been taught by life itself and not by lessons. . . . Do not press your own knowledge too much upon the child, rather let truth itself speak to him: never tire of putting before his eyes whatever is likely to instruct him or help his development.” In fact, we find the foundations of most of his principles in these notes.

At Stanz his mind is ever busy watching the effects of his methods upon the children and drawing conclusions therefrom; and these he set down in writing in a letter sent from Gurnigel—where he had gone to re-

crucial his health, immediately on leaving Stanz—to his friend Gessner. At Burgdorf he continued this work of observation and reflection. He writes thus about his class-work in school: "I was every moment confronted with facts which threw increasing light on the physical and mechanical laws by which our minds are enabled to receive and retain external impressions. Every day I strove more and more to conform to these laws in my teaching, although I did not thoroughly understand the principle upon which they were based till last summer." Here also he did some individual child-study. He writes: "A mother full of interest for the education of her child, entrusted me with the instruction of her little boy, then hardly three years old. I saw him, for some time, an hour every day; and with him, too, I was merely, as it were, feeling the pulse of the method: I tried to convert letters, figures, and whatever else was at hand, into means of instruction; that is to say, I led him to form, concerning every object, distinct notions, and to express these notions clearly in language. . . . It threw a good deal of light upon the means of enlivening the child's faculties, and inducing him to independent exertion for the preservation and increase of his powers. . . .

"The experiment I made with this boy could not be decisive as to the earliest beginning of instruction; for this reason, that he had already been allowed to pass in comparative inactivity the three first years of his life; a period during which, I am convinced, nature urges upon the child's consciousness an immense variety of objects" (*How Gertrude Teaches*).

Through these observations and experiments he was led to modify his ideas and methods from time to

time. Thus in teaching writing at Burgdorf, he says : " Instead of getting the children to form letters with their pencils, as I had done at Stanz, I now gave them angles, squares, straight lines and curves to draw. During these endeavours, the idea of making an alphabet of forms [see p. 218] was gradually developed in me. I had not, however, at first, a very distinct notion of it myself, but in proportion as the subject emerged in my mind from its obscurity, my conviction of its importance for the whole of my proposed method of instruction increased. It was a long time before I saw quite clearly into it ; my progress was inconceivably slow. I had for several months, already, been engaged in the attempt to resolve the different means of instruction into their elements, and I had taken great trouble to reduce them to their greatest simplicity. Still I could not see their inter-connection ; or at any rate, I had not a clear consciousness of it, though I felt that I was advancing every hour, and that with rapid strides " (*How Gertrude Teaches*).

M. Tobler has this reference to Pestalozzi's experimenting : " I saw that he attached no value to the details of his experiments, but tried many of them with a view to throw them aside again, as soon as they should have answered their temporary purpose. With many of them he had no other object than to increase the internal power of the children, and to obtain for himself further information concerning the fundamental principles on which all his proceedings rested."

M. Fischer, in a letter to Steinmuller (editor of *Swiss Schoolmasters' Library*), 20th December, 1799, writes : " It is almost incredible how indefatigably he makes experiments ; and inasmuch as he philosophises more

after the experiments than before them—except as to a few guiding principles—he must needs increase them; but the results gain in certainty thereby. . . . In this way not only are many parts of the methods hitherto in use subjected to criticism, but also many forms and details of methods are discovered and at once adapted to the new point of departure.”

Dr. Mayo gives us an account of the manner in which Pestalozzi would seize upon, and make use of, incidents in school work as the basis of principle and practice. “It was proposed to bring education more in contact with the child’s own experience and observation, and to find in *him* the first link in the chain of his instruction. In the execution of this plan, a series of engravings was provided, representing those objects which are familiar to children; and the lessons consisted in naming their parts, describing their structure and use. One day, however, the master having presented to his class the engraving of a ladder, a lively little boy exclaimed: ‘But there is a real ladder in the courtyard; why not talk about it rather than the picture!’ ‘The engraving is here,’ said the master, ‘and it is more convenient to talk about what is before your eyes than to go into the courtyard to talk about the other.’ The boy’s observation, thus eluded, was for that time disregarded.

“Soon after, the engraving of a window formed the subject of examination; ‘But why,’ exclaimed the same little objector, ‘talk of this picture of a window, when there is a real window in the room, and there is no need to go into the courtyard for it?’ Again the remark was silenced, but in the evening both circumstances were mentioned to Pestalozzi. ‘The boy is

right,' said he; 'the reality is better than the counterfeit; put away the engravings, and let the class be instructed by means of real objects.' The plan was adopted." Herein is also the evolution of the Object Lesson.

The foregoing will show that Pestalozzi was not ignorant of the methods of scientific inquiry, and that he did not fail to make use of them. He had studied natural history during his student days at Zurich; and the researches which he, for several years, pursued before writing his treatise *On Legislation and Infanticide*, the *Inquiry*, etc., and *Essay on the Causes of the French Revolution*, must all have disciplined him, to some extent, for his educational investigations and speculations. But, after all, his supreme qualification for the work he did was just his genius. To genius it would seem, in some cases, that power is given to create a world of ideas from what had previously been almost a formless void; whilst it is always its privilege to make actual what other men may not yet have dreamed to be even possible. Genius is the greatest of all influences in human affairs, and, therefore, speaking broadly, needs less influencing from other forces—and, indeed, is least open to the action of ordinary influences, because it is so much superior to them. The pity is that in the case of Pestalozzi the expression of his great thoughts is sometimes so indistinct and so involved that it is difficult, if not impossible, to say exactly what he means. Yet there is an overwhelming force of truth and clearness in most of his work, and it is quite possible for his disciples to construct a sound and connected body of principles from what he has written; and we now proceed to make an attempt to do something of this sort.

I. Education as the Means of Social Development.

We must always remember that Pestalozzi was, first and last, a social and political reformer, and that he regarded the education of the poorer classes as the only sure means to bring about sound social reform. "Elementary education alone can regenerate and save society," he said. Again, he writes: "Let us hope that those who govern humanity will come to the conviction that the betterment of the human race is their most important, indeed their sole, concern. I am convinced that, sooner or later, all that I wish for the education of the people will be realised." As a boy he got to know, through his visits to his uncle and grandfather, of the hard lot of the country people, and used to say: "When I am big, I shall stand up for the peasants; they have a right to the same advantages as the townspeople". When a student he had written, in *Der Erinnerer*: "I wish that all who work with their hands, all who live hard-working, frugal and self-supporting lives, should be looked upon as the pillars of our liberty, and be much more esteemed amongst us". During this period he also published an essay in which he tells the history of Agis, King of Sparta, who endeavoured to reform his people. Although brought up amidst the greatest luxury he lived a severely simple life, and tried to persuade his wealthier subjects to follow his example. He also tried to secure a fresh distribution of land amongst his people, so that general prosperity might be restored. He failed in his efforts, and paid for his boldness with his life. Pestalozzi eloquently praises Agis for his wisdom and courage.

At Neuhof he begins his great educational work by

trying to reclaim the outcast and poor; at Stanz he seeks to save the orphans; at Burgdorf he longs to return to his Poor School work; at Yverdon he insists on returning to his first and constant love; and, finally, when he returns to Neuhof to die, he again begins his cherished labour of love for the poor and neglected. He sought to strengthen and refine the weakest and roughest link in the social chain. He says: "If we wish to aid the poor man, the very lowest among the people, we can do so only in one way, namely, by changing the schools of the people into places of true education, in which the moral, mental and physical powers, which God has put into our nature, may be drawn out, so that a man may be enabled to live such a life as he should live: happy in himself, and a blessing to others. Only in this way can a man, whom in the whole world nobody does really help because nobody can truly help, learn to help himself." This is a fine conception, and expression, of the truest and best way of helping others. It is universal in its truth, and Pestalozzi was always striving to make it universal in its application.

Pestalozzi argues, in *Leonard and Gertrude*, that if men are impoverished in mind and body they become degraded in both, and develop such vices as dishonesty, low cunning, craftiness, suspicion, wild violence, revengefulness and cruelty. They lose all, what are commonly called, the natural affections and develop many of the worst animal instincts: cruelty to their own offspring, treachery to one another, and bestial living. Thus society not only loses all the advantages which might be obtained by providing means for cultivating the powers for good which are in every man, but

suffers the positive dangers and disasters of having to control viciously disposed human beings.

It is, therefore, a duty of society to provide education for all, both because all God's gifts to man are good, and lay upon us the obligation of using them well and rightly; and because the self-interests of society are concerned in getting the best, and not the worst, from each and every member of the social body. The first aim of governments should, therefore, be to get the most and the best from the working classes. They should, at least, take as intelligent a view of the situation as the slave-owner, *viz.*, that the better the workers are cared for the better it will be for the money-bags. Even such a mercenary motive would lead to a very different treatment of the peasants.

The value of a man to the community in which he lives depends almost wholly upon the full and right development of his faculties, and the proper employment of his trained powers. To this end the social institutions, morals and methods of education need to be of the best. If men lack social culture they tend to remain in the state of primitive man; and true justice and security are impossible in the society in which they live. Education should prepare individuals for what they will be in the community. They should be so trained that they use their abilities to the greatest possible advantage, whether it be as ploughmen or rat-catchers.

As a matter of fact, says Pestalozzi, we find that the children of the poor are the best educated in relation to the work they will have to do in the community. Mothers and fathers instinctively see what is necessary and best for their children—in the state of life in which

they live and are likely to live—and they find, in domestic affairs, the ways and means for educating them. If they did not do this they would, in time, certainly lose their positions in the industrial world. Hence it has become a tradition to pass on from generation to generation a domestic education.

The children of the working classes are, in the above sense, far better educated than those of the well-to-do; and this because they have not been to school. The methods of the schools are so wrong and unsuitable that they do far more harm than good. They are too abstract, too general, too superficial, and too little connected with, and similar to, family life. The reason that the old-fashioned education was so successful is that it was based upon, and given through, the actual affairs of life, and chiefly those of the home. So far, therefore, as we use schools for educating children they must in all important points resemble and reflect the home and home life. It is true that the school can supply the conditions of the common life of a community, which the home cannot; but until the school has discharged the functions of the home, it is not able to do other, or higher, work. In mental, moral and physical education, the school must employ the matter and the manner of the good mother and the good home.

Now, the first aim of the well-conducted home is to provide for the physical needs and comforts of each member of the family; so the first aim of primary education should be based upon the primary needs of human beings. It should, therefore, be industrial and practical in its methods, in the first instance. To live, man must eat; to eat, he must work for food; and to work well, he must be well trained for work. There is a wise old saw

amongst the common people which says, "First learn your trade, and then talk about it". This contains much wisdom, for in learning to work many instructive experiences are gone through: the habit of fixed attention is developed: the power of judgment is exercised and sharpened: and the feelings and sentiments are developed. Thus the mind is best prepared—by actually finding out certain general rules of actions and conduct, and by the observation and consideration of single facts—to proceed to deal with general principles, and the investigation of details through instruction at school.

It will, says Pestalozzi, be said that domestic education is impossible because mothers are not qualified to give it. This difficulty was always present to his mind; he frequently refers to it; and he believed that he had solved it. Speaking of his work at Stanz, he says: "My aim was to carry the simplification of the means of teaching so far that all the common people might easily be brought to teach their children, and gradually to render the schools almost superfluous for the first elements of instruction. As the mother is the first to nourish her child physically, so, also, by the appointment of God, she must be the first to give it spiritual nourishment; I consider that very great evils have been brought about by sending children too early to school, and by all the artificial means of educating them away from home. The time will come, so soon as we shall have simplified instruction, when every mother will be able to teach, without the help of others, and, thereby, at the same time continue her own education" (*How Gertrude Teaches*).

Education must be practical in the sense that it must prepare the individual to find happiness in his life's

work, whatever it may be; and, in all circumstances, to be a useful member of society. Every man should be educated for his station in life, whether he be legislator, lawyer, clergyman, or a member of any other profession. In like manner the poor should be educated for poverty. Children in orphanages, and other benevolent institutions, should be thus educated. If they are they will be able to earn enough to pay for their schooling, and something over; and the state will be relieved from their after care—because of failure arising from their ignorance and incapacity. Pestalozzi sums up his position thus: “I simply put to myself the question: What would you do if you wished to give a single child all the theoretical knowledge and practical skill which he requires in order to be able to attend properly to the great concerns of life, and so attain to inward contentment? . . . What are the means of developing in the child those practical abilities, which the ultimate purpose of his existence, as well as the changeable positions and relations of life, will or may require of him, and cultivating them to such a degree of perfection that the fulfilment of his duties will be to him, not only possible or easy, but in reality a second nature?”

Children thus educated will be very unlikely to desire to engage in work other than that for which they have been prepared; unless, in individual cases, there is very special ability and favourable opportunities. At the same time it must not be forgotten that the earliest education given will, in all cases, be quite general and preparatory, not special or professional. The latter needs a well-prepared mind and nature, or it cannot possibly be fully successful. Education does not aim

at making good artisans, tradesmen, etc., but good men who will certainly become good tradesmen, artisans, etc.

To omit this practical training, or to give theoretical instruction before it, is to put the cart before the horse : to make preachers and prattlers instead of doers and thinkers : and mere guessers instead of investigators. Domestic work and duties : the importance of careful attention and correct method in doing them : the need of prompt, cheerful and willing obedience : the constant thinking of, and working for, others, all tend to develop both the heart and the mind, and to make good men and good citizens. The mother and the home, therefore, and not the book and the school, are the right and proper beginnings of education.

II. Education as a Means of Moral and Religious Development.

The chief end of education is morality, for the human element in our nature can only be truly developed through the development of the godlike element which is present in man. Man is destined for eternity. The true mother says : “ ‘ My children are born for eternity, and confided expressly to me that I may educate them for being children of God ’ . . . She hails in her offspring not merely the citizen of the world : ‘ Thou art born,’ she cries, ‘ for immortality, and an immortality of happiness : such is the promise of thy heaven-derived faculties ; such shall be the consummation of thy Heavenly Father’s love ’ ” (*On Infants’ Education*). Hence the good home gives the best moral training, whether for private or for public life. This is chiefly because it is in the relation of the child to the mother that all true morality begins ; and because we must be moral before

we can be religious, *i.e.*, until we have right feelings and conduct towards our brother, whom we have seen, we cannot have right feelings and conduct towards God, whom we have not seen. Pestalozzi sets out his views on these points in a very clear and charming way.

“I find that the feelings of love, confidence and gratitude, and the habit of obedience, require to be developed in man, before they can be directed to the Divine Being as their object. I must love men, confide in men, be grateful to men, and obey men, before I can cherish the same feelings, and practice the same virtues towards God, ‘for he that loveth not his brother, whom he hath seen, how can he love God, whom he hath not seen’.

“The question then is: What are the means of awakening in the child, love, confidence, gratitude and obedience, with regard to man? I answer: All those virtues originate in the relationship established between the infant and its mother. The mother is impelled, as it were, by instinct to nurse and foster her child, to afford him shelter and happiness. She satisfies all his wants, she removes from him all that is unpleasant to him, she assists his helplessness, the child is provided for and made happy: the seed of love begins to be unfolded.

“A new object strikes his senses; he is astonished, afraid, he cries; the mother presses him more fondly to her bosom, she plays with him, amuses him; he ceases from crying, but the tears remain in his eyes. The object re-appears, the mother throws round him again her protecting arms, and comforts him with a smile; he cries no longer, his bright unclouded little eye answers the mother’s smile: the seed of confidence has taken root.

“The mother runs to the cradle whenever he has any want; she is there in the hour of hunger, at her breast his cravings are satisfied; when he hears her step approaching his cryings cease; when he sees her, he stretches out his little arms; while hanging at her bosom his eyes beam with satisfaction; mother and satisfaction are to him but one idea—it is that of gratitude.

“The germs of love, confidence and gratitude grow rapidly. His ear listens to his mother’s footsteps; his eye follows her shadow with a smile; he loves those who resemble her: a being who resembles his mother is, in his idea, a kind being. He beholds the human form, the form of his mother, with delight: whoever is dear to his mother is dear to him; he embraces those whom she embraces, and kisses those whom she kisses: the love of mankind, brotherly love, springs up in his heart. . . .

“Nature opposes the storming child by unbending necessity. The child knocks against wood and stone; nature remains unbending, and the child ceases to knock against wood and stone. The mother also begins to oppose in the same manner the turbulence of his desires. He raves and kicks: she remains inexorable—he ceases to cry, and accustoms himself to subject his will to hers: the seeds of patience and obedience are unfolding themselves in his heart.

“By the united action of love, gratitude, confidence and obedience, the conscience is awakened: the first shade of a feeling that it is wrong to rave against a loving mother; that the mother is not in the world for his sake only. This leads to the feeling that other beings and things, nay, he himself, are not made for

his sake only: and here are the first germs of duty, of right. . . .

“The infant trusts and obeys, but he is unconscious of the grounds of his confidence and of his obedience, and as he becomes gradually conscious of them, this power over him diminishes in the same proportion. He begins to feel himself, he leaves the hand of his mother, and a voice whispers in his bosom, ‘I have no more need of my mother’. The mother reads in his eyes the rising thought, she presses her darling more affectionately than ever to her bosom, and she says, with a voice such as he never heard before, ‘Oh, my child, there is a God of whom thou wilt have need, though thou shouldst have no more need of me: a God who will protect thee when I am no longer able to do it: a God who will prepare for thee joy and happiness, when I have no more to give’.

“Then rises in the child’s bosom an unspeakable something, a holy feeling, an impulse of faith, that raises him above himself. He rejoices to hear the name of God from the lips of his mother, the feelings of love, gratitude and confidence, which the sympathies of her bosom kindled in him, are enlarged; they now embrace his Heavenly Father, as they first did his earthly parents. The sphere of obedience is extended; the child now fears the eye of God, as it did before that of its mother; and as for the mother’s sake heretofore, so now he does right for the sake of God. . . .

“The further development of those feelings requires the highest art of education. Those feelings are of divine origin, and on their preservation, therefore, depends the measure of moral power of which the child shall afterwards be possessed. Every means should

be used to supply new fuel to those feelings, when the physical incentives cease, which called them forth in infancy; and the charms of the world should be presented to the child in constant subserviency to those feelings.

“Here you must not trust to nature; you must do all that is in your power to supply the place of her henceforth blind guidance, by the wisdom of experience. For the world which the child now enters, is not such as it went forth from the hands of the Creator; it is a world full of deadly poison, both as regards his sensual enjoyments and the feelings of his moral nature; a world full of warfare, selfishness, inconsistency, violence, conceit, falsehood and deception” (*How Gertrude Teaches*).

In the world of morals, as in all else that concerns the development of the human being, it is life itself which must give the beginnings and the basis of education. The proper work of moral education is to secure the pure development of the will, in its highest and fullest form, through the continued and ever-loftier exercise of its power in love, gratitude and faith—the moral elements already brought into life and activity in the relations of the mother and the child. We must get the child to strive after moral perfection by teaching it to exercise its will through moral thoughts, feelings and deeds.

“Man readily accepts what is good, and the child willingly listens to it; but it is not for your sake that he desires it, master and educator, but for his own. The good to which you wish to direct him must not depend upon your varying moods or temper; it must be a good which is good in itself and in the nature of

things, and which the child can recognise, for itself, as good. He must feel that there is a necessity for your will in things which have to do with his well-being before he can be expected to obey you.

“Whatever he does gladly; whatever brings him credit; whatever helps him to realise his greatest hopes; whatever rouses his powers and enables him to say with truth *I can*: these things he *wills*. But will, in this sense, cannot be aroused by mere words; it can only be brought into activity by the powers and feelings which come from general culture [humane education]. Words alone cannot give a real knowledge of things: they only give expression to, a picture of, what we already have in our minds.

“Try, first, to broaden your children’s sympathies, and, through satisfying their daily needs, to bring love and kindness into such unceasing association with their impressions and activity, that these sentiments may be engrafted in their hearts; then try to give them such judgment and tact as will enable them to make a wise, sure and abundant use of these virtues in the circle in which they live. Finally, do not hesitate to touch on the difficult questions of good and evil, and the words connected with them. You must do this more particularly in connection with the ordinary events of everyday life, upon which all your teaching in these matters must be founded, so that the children may be reminded of their own actual feelings, and supplied, as it were, with solid facts upon which to base their conception of the beauty and justice of the moral life. . . .

“Elementary moral education, considered as a whole, has three distinct elements: first, the children’s moral

sense must be aroused through their feelings being made active and pure; then they must be exercised in self-control, and thus enabled to devote themselves steadily to that which is right and good; finally, they must be brought to form for themselves, by reflection and comparison, a just idea of the moral rights and duties which belong to them by reason of their position and surroundings" (*How Gertrude Teaches*).

Moral training is possible under all circumstances, and through all kinds of work. Work is, in itself, neither moral nor immoral, but the manner in which it is done is either one or the other. Therefore children can be as easily educated in morals whilst living in an industrial institution as in any other circumstances. Indeed all forms of physical exercises have a direct connection with moral education. "If the physical advantage of gymnastics is great and uncontrovertible, I would contend that the moral advantage resulting from them is as valuable. . . . Gymnastics, well conducted, essentially contribute to render children not only cheerful and healthy, which, for moral education, are two all-important points, but also to promote among them a certain spirit of union, and a brotherly feeling, which are most gratifying to the observer. Habits of industry, openness and frankness of character, personal courage, and a manly bearing in suffering pain, are also among the natural and constant consequences of an early and a continued practice of exercises on the gymnastic system" (*On Infants' Education*).

Like Aristotle, Pestalozzi has a firm belief in the moral influence of music. He calls it "one of the most effective aids of moral education. . . . It is the marked and most beneficial influence of music on the feelings,

which I have always thought and always observed to be most efficient in preparing or attuning, as it were, the mind for the best impressions. The exquisite harmony of a superior performance, the studied elegance of the execution, may indeed give satisfaction to a connoisseur ; but it is the simple and untaught grace of melody which speaks to the heart of every human being. Our own national melodies, which have since time immemorial been resounding in our native villages, are fraught with reminiscences of the brightest pages of our history, and of the most endearing scenes of domestic life. But the effect of music in education is not only to keep alive a national feeling : it goes much deeper ; if cultivated in the right spirit, it strikes at the root of every bad or narrow feeling, of every ungenerous or mean propensity, of every emotion unworthy of humanity. . . .

“ I need not remind you of the importance of music in engendering and assisting the highest feelings of which man is capable. It is almost universally acknowledged that Luther has seen the truth, when he pointed out that music, devoid of studied pomp and vain ornament, in its solemn and impressive simplicity, is one of the most efficient means of elevating and purifying genuine feelings of devotion ” (*On Infants' Education*).

III. Education as a Means of Physical Development.

Pestalozzi not only advocated and carried out systematic physical education, but he had, as in other matters, a very deep insight into the nature of the elements and the ends of it. He says : “ If, according to correct principles of education, all the powers of man are to be developed, and all his slumbering energies called into

play, the early attention of mothers must be directed to a subject which is generally considered to require neither much thought nor experience, and, therefore, is generally neglected. I mean the physical education of children. Who has not a few general sentences at hand, which he will be ready to quote, but perhaps not to practise, on the management of children? . . .

“The revival of gymnastics is, in my opinion, the most important step that has been taken in this direction. The great merit of the gymnastic art is not the facility with which certain exercises are performed, or the ability which they may give for certain exertions that require much energy and dexterity; though an attainment of that sort is by no means to be despised. But the greatest advantage resulting from a practice of such exercises, is the natural progression which has to be observed in the arrangement of them: beginning with those which, while they are easy in themselves, lead, as preparatory exercises, to others which are more complicated and more difficult. There is not, perhaps, any art in which it may be so clearly shown, that powers which appeared to be wanting, are to be developed by no other means than practice alone. . . . When ability is wanting altogether I know that it cannot be imparted by any system of education. But I have been taught by experience to believe that cases in which talents of any kind are absolutely wanting are very few. In most cases I have had the satisfaction to find that a faculty which had been given up as hopeless, instead of being helped to develop had been hindered and obstructed in its activity by a variety of exercises which tended to confuse the learner or deter him from further exertion.

“And here I would attend to a prejudice which is

very common concerning gymnastics: it is frequently said that they may be very good for those who are strong enough; but that those who are of a weak constitution would be altogether unequal to, and even endangered by, the practice of gymnastics. Now I will venture to say that this rests merely upon a misunderstanding of the first principles of gymnastics: that exercises must not only vary according to the strength of individuals, but that they should be, and indeed have been, devised for those also who were actually suffering. I have consulted the authority of the first physicians, who declared that, in cases which had come under their personal observation, individuals affected with pulmonary complaints—if these had not already gone too far—had been materially relieved and benefited by a constant practice of the few and simple exercises which the system, in such cases, proposes. . . . Exercises may be devised for every age, and for every degree of bodily strength, however reduced. . . .

“Physical exercises ought by no means to be confined to those exercises which now receive the name of gymnastics. By means of them strength and dexterity will be acquired in the use of the limbs in general; but particular exercises ought to be devised for the practice of all the senses. This idea may at first seem a superfluous refinement, or an unnecessary encumbrance of free development. We have acquired the full uses of our senses, it is true, without any special instruction of that sort: but the question is not whether these exercises are indispensable, but whether, under many circumstances, they will not prove very useful.

“How many are there of us whose eyes would, without any assistance, judge correctly of a distance, or of the

proportion of the size of different objects? How many are there who distinguish and recognise the nice shades of colours, without actually comparing the one with the other; or whose ears will be alive to the slightest variation of sound? Those who are able to do such things with some degree of perfection, will be found to derive their facility either from a certain innate talent, or from constant and laborious practice. Now it is evident that there is a certain superiority in these attainments, which natural talent gives without any special exertion, and which instruction could never impart, though attended by the most diligent application. But if practice cannot do everything, at least it can do much; and the earlier it is begun, the easier and the more perfect must be the success" (*On Infants' Education*).

True physical education is much more than a developing of muscle: it is a developing of mind. Not only does our very existence depend upon the proper exercise of our body, but the nurture of the intellectual powers, in the first instance, depends upon the activity and development of the physical powers. The inner unity of our nature depends upon, and demands, the harmonious and balanced development of body and mind. The mind would have little or nothing which would arouse its activities if it were not for the exercise of the senses and the general physical powers.

The direct aim so far as the physical powers themselves are concerned should be: (1) the development of strength, which can be secured through exercises which demand easy control of the limbs, and the overcoming of physical obstacles; and (2) the development of grace, which may be obtained through exercises which require regular and rhythmic movements.

The view of physical education which Pestalozzi held is evidently a very broad and comprehensive one. He sought to further normal development : to correct wrong and defective development : to train the special senses as well as the muscular system : to use gymnastics as a curative agent in cases of disease : to produce muscular power and skill : to afford pleasure and the development which comes from play : and to aid intellectual and moral development. With some of these points we shall deal further in a later chapter.

CHAPTER X.

PESTALOZZI THE THINKER (*continued*).

WE now come to the most important and the most difficult part of our study: Pestalozzi's ideas on the intellectual basis of all education, and the education of the intellect. This is most important because it is the most fundamental part of his thought and work; and it is the most difficult because of the characteristics of his own mind and methods. However, we do but attempt to do something like what Niederer tried to do for him, during his lifetime; and what Pestalozzi himself exhorted his disciples to do: systematise (as best we can) the great thoughts which he gave out so profusely and so promiscuously.

With his usual frankness and modesty, Pestalozzi disclaims any pretension to have set forth a complete theory and art of education. He writes: "When I assert positively that a man's powers are all part of an organic whole, I do not in the least wish to suggest that I have thoroughly apprehended either this organism or its laws; and when I state that a rational method must be followed in teaching, I do not for a moment pretend that I have always followed such a method, or that I have worked out all the details of one". In one passage he likens himself to "the Egyptian who first fastened the shovel to the horns of an ox, and so taught it to do the work of the man who

digs; [and thus] led the way to the discovery of the plough, though he did not bring it to perfection” (*How Gertrude Teaches*).

Since the end and aim desired must determine the ways and means adopted, we propose to give extracts in which Pestalozzi has summarised, more or less, his views on these two aspects of education. These are meant to serve as a summary of the preceding chapter and a preparation for part v. of this chapter.

IV. What Education is.

From the social aspect he says: “the education of men is simply the filing of each ring in the great chain which joins humanity together and makes it a whole. The mistakes of education are due to working at each ring of the chain separately, as though it were a separate unit, and not an integral part of the whole: as though the strength and utility of each ring were due to the fact of its being gilded, silvered, or even set with precious stones, and not due to the fact that it had been made supple and strong enough always to take part in all the movements of the chain in all its windings” (*Leonard and Gertrude*).

“The ultimate end of education is not a perfection in the accomplishments of the school, but fitness for life; not the acquirement of habits of blind obedience, and of prescribed diligence, but a preparation for independent action. We must bear in mind that whatever class of society a pupil may belong to, whatever calling he may be intended for, there are certain faculties in human nature common to all, which constitute the stock of the fundamental energies of man. We have no right to withhold from any one the opportunities for develop-

ing all their faculties. It may be judicious to treat some of them with marked attention, and to give up the idea of bringing others to high perfection. The diversity of talent and inclination, of plans and pursuits, is a sufficient proof of the necessity for such a distinction. But I repeat that we have no right to shut out the child from the development of those faculties also, which we may not for the present conceive to be very essential for his future calling or station in life. . . .

“ Education, instead of merely considering what is to be imparted to children, ought to consider first what they may be said already to possess, if not as a developed, at least as an involved faculty capable of development. Or if, instead of speaking thus in the abstract, we will but recollect, that it is to the great Author of life that man owes the possession, and is responsible for the use, of his innate faculties, education should not only decide what is to be made of a child, but rather inquire, what is a child qualified for; what is his destiny, as a created and responsible being; what are his faculties as a rational and moral being; what are the means pointed out for their perfection, and the end held out as the highest object of their efforts? They embrace the rightful claims of all classes to a general diffusion of useful knowledge, a careful development of the intellect, and judicious attention to all the faculties of man, physical, intellectual and moral” (*On Infants' Education*).

The moral side of education was regarded by Pestalozzi as directly social in its bearings. “ In relation to society, man should be qualified by education to be a useful member of it. In order to be truly useful it is necessary that he should be truly independent. . . .

True independence must fall and rise with the dignity of his moral character. . . . A state of bondage, or of self-merited poverty, is not more degrading than a state of dependence on considerations which betray littleness of mind, want of moral energy, or of honourable feeling. . . . Education should contribute in giving happiness. The feeling of happiness does not arise from exterior circumstances; it is a state of mind, a consciousness of harmony both with the inward and the outward world: it assigns their due limits to the desires, and it proposes the highest aim to the faculties of man" (*On Infants' Education*).

From the personal or individual point of view Pestalozzi says that "education consists in returning to the methods of Nature, and in developing and improving the dispositions and powers of man. . . . [It] involves the harmonious balance of all a man's powers, and this involves the natural development of each and all. Each power must be developed according to the laws of its own nature, and these are not the same for the heart, for the mind, and for the body" (*Swan's Song*).

"Each of our moral, mental and bodily powers must have its development based upon its own nature, and not based upon artificial and outside influences.

"Faith must be developed by exercises in believing, and cannot be developed from the knowledge and understanding, only, of what is to be believed; thought must grow from thinking, for it cannot come simply from the knowledge and understanding of what is to be thought, or the laws of thought; love must be developed by loving, for it does not arise merely from a knowledge and understanding of what love is, and of what ought to be loved; art, also, can only be cultivated through

doing artistic work and acquiring skill, for unending discussion of art and skill will not develop them. Such a return to the true method of Nature in the method of the development of our powers necessitates the subordination of education to the knowledge of the various laws which govern those powers" (*Address, on Seventy-second Birthday*).

Pestalozzi thus speaks of his own efforts to follow the method of nature: "The more I pursued the track of nature, the more I strove to connect my endeavours with her working and exerted myself to keep pace with her, the more did I perceive the immense progress of her course; and, to my astonishment, I found the child endowed with sufficient power to follow her. The only weakness I met with was [my own] inability to make the best use of what was already in existence; I found myself guilty of the weakness of presumption, in making myself the moving power, instead of merely collecting materials for an internal power of action; or rather, in attempting to cram that into the child, which is only to be drawn forth from him, as it is primitively deposited in him, and requires nothing but a stimulus of life to give the impulse for its development. I now thought thrice before I presumed to imagine anything too difficult for the children; and ten times before I ventured 'It is beyond them'. I was brought to the firm conviction that all instruction, to have a truly enlightening and cultivating influence, must be drawn out of children and, as it were, begotten within their minds" (*How Gertrude Teaches*).

Again he says: "The idea of elementary education, to which I have devoted my life, consists in re-establishing the course of nature, and in developing and

improving the tendencies and powers of humanity" (*Swan's Song*). It is interesting to compare this statement with one by so modern, and competent, an authority as Sir James Crichton Browne: "Education is the guidance of growth".

"Elementary education, accurately defined, is the outcome of the efforts of the human race to give such assistance to the course of nature in the development and perfecting of our powers, as the intelligent love, the trained thought, and the enlightened artistic sense of our race are capable of giving. Left to itself the course of nature is only quickened by the animal instincts. It is the duty of the race, and the aim of elementary education—as of religion and wisdom—to animate the course of nature by human and divine influences. . . . Only that which takes possession of man as a whole (heart, mind and hand) is educative in the true sense of the word, and in accordance with nature. Anything which does not so take possession of him, is not in accord with nature, and is not, therefore, in the true sense of the word, humanly educative. All one-sided development of any one of our powers is not true education" (*Swan's Song*).

"What natural instinct has done unconsciously, but with sure and certain success, the educator must continue, through his insight and intuitive knowledge; what has resulted from the necessities of nature, must be continued by education, guided by reason: and must be equally thorough and complete in its treatment and as certain of success" (*On the Idea of Elementary Education*).

"Man can, at best, do no more than assist the child's nature in the effort which it makes for its own development; and to do this, so that the impressions

made upon the child may always be commensurate, and in harmony, with the measure and character of the powers already unfolded in him, is the great secret of education. The perceptions to which a child is led by his instruction must, therefore, necessarily be subjected to a certain order of succession, the beginning of which must be adapted to the very first unfolding of the child's powers, and its progress kept exactly parallel with that of the child's own development. [We must] discover those successions throughout the whole range of human knowledge, but especially in those essentials in which the development of the human mind takes its beginning" (*How Gertrude Teaches*).

Pestalozzi is very definite in his view that the idea of education must be such that it clearly recognises that human life is evolutionary in its processes—what we should now call the organic and genetic view of education. He says that elementary education deals, essentially, with human nature as a unity, as a whole; and with the whole system of its powers and dispositions. "The idea of elementary education is a general idea which must necessarily be divided into moral, mental and physical education for purposes of exposition and application, but such single divisions never occur in human life: on the contrary, the moral, mental and physical always interpenetrate, for human nature is a unity" (*On the Idea of Elementary Education*). He makes use of several analogies to show what he means, e.g., "A child is a being endowed with all the faculties of human nature, but none of them developed: a bud not yet opened. When the bud uncloses every one of the leaves unfolds, not one remains behind. Such must be the process of education" (*On Infants' Education*).

Again in his treatise *On the Idea of Elementary Education*, he says that education must imitate the processes of nature. In every plant, at every stage of growth, there is a harmonious and interdependent development of substance and form, so that at any and every period of its growth, the plant is (1) complete in its whole being, *i.e.*, neither too advanced nor too backward in any particular details, but a well-balanced whole; and (2) incomplete, inasmuch as it is always growing. Just so, in education, the child must always appear to be both complete and incomplete: complete as to the particular stage of its development, incomplete as to its unending development. The pupil must grow out of himself into his surroundings and position.

Education must provide whatever is necessary to nourish every single human power: the activities and exercises which shall call forth and improve each and every faculty: and the proper gradation of such exercises so as to suit the increasing capacity and strength of such powers and faculties. A child is a living self-active force which, from the earliest moment of its being, acts organically on its own development. Nothing can efficiently act upon the child unless the child acts upon it. The laws and activities of the child, as an organism, are within itself. Whatever nature, the mother, and the domestic surroundings may give to the child in the way of stimulations and impressions—so absolutely necessary for its existence and well-being—these only impel and condition the child's activities; they have not, and cannot have, any power over the nature of these activities. Human capacities develop out of themselves and according to their own nature: experiences are the cause of the particular form and

content of the development, but not of its being and fundamental characteristics.

A typical summary definition is given in the following passage: " Education does not consist in a series of admonitions and corrections, of rewards and punishments, of injunctions and directions, strung together without unity of purpose, or dignity of execution ; it ought to present an unbroken chain of measures, originating in the same principle : a knowledge of the constant laws of our nature ; practised in the same spirit : a spirit of benevolence and firmness ; and leading to the same end : the elevation of man to the true dignity of a spiritual being " (*On Infants' Education*).

Perhaps the clearest and fullest expression of Pestalozzi's view of the organic and genetic nature of education is given in the following : " The mechanism of nature is everywhere sublime but simple. Imitate it, oh man ! Imitate nature, that from the seed of the greatest tree produces at first nothing but a hardly perceptible growth, which slowly and insensibly increasing from day to day, and hour to hour, gradually develops into trunk, branches, twigs and leaves. Observe carefully how nature protects and strengthens each new part as it is developed, that it may serve in its turn as the source of still further development.

" Observe how the flower only develops after having been formed in the heart of the bud, how the beauty of its first days soon passes away, giving place to the fruit, as yet but a feeble growth, but already complete in its essential features ; and how for months this fruit hanging to the branch which nourishes it, grows and develops till finally, ripe and perfect, it falls from the tree.

" Observe how nature no sooner brings the first shoot

above the ground than it sends forth the first sprouting of the root, and gradually carries deep into the bosom of the earth the noblest part of the tree ; how by a subtle process it develops the stationary trunk from the very heart of the root, and the branches from the heart of the trunk ; how, to each part, no matter how feeble or how subordinate, it supplies the necessary nurture — yet there is nothing useless, inappropriate, or superfluous ” (*How Gertrude Teaches*).

In another place he writes: “ The moral, spiritual and artistic capabilities of our nature must grow out of themselves ”. “ The gardener plants and waters, but God giveth the increase.” As Raumer well remarks on these statements: “ It is not the educator that implants any faculty in man ; it is not the educator that gives breath and life to any faculty : he only takes care that no external influence shall fetter and disturb the natural course of the development of man’s individual faculties,” and, we may add, does all that learning, wisdom, practical skill and opportunity enable him to supply the best of everything needed for the best development.

Pestalozzi’s estimate of the importance of the organic and genetic elements in the principles of education was by no means incidental or superficial : he grasped both their historical and scientific values. He says: “ Nature required ages to raise the race to perfect power of speech, yet we learn this art in a few months. [But] we must take exactly the same course as nature followed with the human race.” Again: “ Apart from all special teaching, I have endeavoured to find the nature of teaching itself ; and the original type according to which nature herself has determined the instruction of our race ”.

Froebel clearly recognised this idea of organic development in Pestalozzi's system. Writing to the Princess Regent of Schwarzburg-Rudolstadt, on 27th April, 1809, to report as to his opinion of Pestalozzi's principles and work—Froebel being at that time resident in the institution of Yverdon—he says: “He has a whole man in his eye, as an unseparated and inseparable whole, and in all that he does and wishes to do for him and his cultivation, he does it for him as a whole. At no time does he act only for the development of one power, leaving the others without nourishment; for example, he is never acting for the mind alone and leaving unconsidered, unsatisfied, uncared for, inactive, the body and the soul, all the powers are cared for at all times.

“But often one or other of the three great divisions of man's nature stands forth and apparently dominates the others.

“Pestalozzi takes into view man according to and in his manifestations, according to the laws of nature, and those which are grounded in the mind of man, when he works specially upon the predominating power; it is not done in an isolated and divided way, but in order to work through his treatment upon the other equal but slumbering and resting powers. So, for example, in one and the same epoch upon the senses, through these upon the body, and through these again upon the feelings, and so on in a perpetual round.”

Similarly Herbart writes: “A perfect regularity in the sequence of studies adapted to all requirements was to me the ideal which I looked upon as the ever present means of ensuring to all instruction its real efficiency. It was the discovery of this sequence, of the arrangement and co-ordination of what was to be learned con-

temporaneously and what consecutively, which formed, as I understood it, Pestalozzi's chief aim" (Herbart's letter on *How Gertrude Teaches*).

Intellectual education is declared by Pestalozzi to be the pure development of our power of knowing—the reason—by the perfectly simple method of making the use of the reason habitual. Now all the activities of the mind are exercised upon (1) the mental results of those original impressions which the objects of the outer world make upon us, and (2) the analysing, comparing and combining of such mental results. Education must, therefore, be based upon, imitate, and assist the natural processes of the mind, *i.e.*, it must be psychological. Pestalozzi said: "I want to psychologise education".

V. The Process of Intellectual Education.

It is clear, from the above, that the starting-point of intellectual education must be the impressions made upon the mind by experiences, for these are the only materials upon which mind can act; and they have, so to say, a compelling force to which the mind inevitably responds. The result of the action and reaction, between the mind and the impression, is that an intellectual product is formed—an idea. To illustrate what Pestalozzi means, we may give this example: if a piece of ice is put into the hand of a child this produces a certain effect upon consciousness, which we express by saying that the mind has the idea of coldness. Of course the child need have no knowledge of the name "coldness". The effect upon consciousness is, under ordinary circumstances, inevitable and absolute; and there must necessarily be set up in the mind what we

call the idea of coldness. Such fundamental elements are involved in all ideas; and by their combinations and relations (through judgment) are derived complex ideas.

Thus we arrive at the very heart and centre of Pestalozzi's theory of education. All mental life and activity begins in this way, therefore all true education must begin, continue and end in this way. He speaks of these fundamental processes as *anschauung*. This word has been variously translated into English as (1) intuition, (2) sense-impression, and (3) observation. We shall follow Pestalozzi's own plan and use all three terms, because they express the various phases of its meaning, *viz.*, (1) of seemingly direct cognition or immediate knowing; and (2) the mediate knowing of external things, for which there must be both observation and sense-impression. Pestalozzi, in one place, defines *anschauung* thus: "It is simply the actual manifestation of external things, and the raising in consciousness the impression which they excite".

This original or native capacity for knowing is well put in another passage in which Pestalozzi says: "I endeavoured to investigate the exact time of life when instruction begins, and I soon arrived at the conviction that the first hour of instruction is the hour of birth: the first tutor is nature: and her tuition begins from the moment when the child's senses are opened to the impressions of the surrounding world. The feeling of novelty by which life first surprises the infant, is in itself nothing else than the first waking up of the capability of receiving those impressions. It is the arousing of all the germs of physical powers, whose growth is completed, and whose whole energy and sole tendency is now directed towards their expansion and cultivation.

The animal is entirely formed, and something above the animal is awakened in it, which, while it clearly testifies the destination of the new-born being for a human existence, gives him at the same time a positive impulse towards the attainment of that purpose."

That the wider meaning of the term is used by Pestalozzi is clearly shown by his own statement: "Anschauung is the immediate and direct impression produced by the world on our inner and outer senses, *i.e.*, the impressions of the moral world on our moral sense, and of the physical universe on our bodily senses".

This, so to say, is the germ form of knowing. If the mind could not know for itself, as we say, it could not be taught to know; any more than a blind man could be taught to see. As Professor James says: "The mere *existence* of a thing outside the brain is not a sufficient cause for our knowing it: it must strike the brain in some way, as well as be there, to be known. But the brain being struck, the knowledge is constituted by a new construction that occurs altogether *in* the mind. . . . And when once there, the knowledge may remain there, whatever becomes of the thing."

Pestalozzi has expressed his own view of the importance of this in education. He writes: "If I look back and ask myself what I have really done towards the improvement of the methods of elementary instruction, I find that in recognising intuition as the absolute basis of all knowledge, I have established the first and most important principle of instruction; and that, setting aside all particular systems of instruction, I have endeavoured to discover what ought to be the character of the instruction itself, and what are the fundamental laws according to which the education of human nature

must be determined in accordance with nature". He also remarks: "Intuition is the absolute basis of all knowledge; in other words, all knowledge must proceed from intuition and must admit of being retraced to that source" (*How Gertrude Teaches*).

To use an illustration to emphasise Pestalozzi's point, we may say that he argues that just as in geometry (Euclid) all the most complex and important proofs and demonstrations grow out of the axioms—which are, in fact, intellectual intuitions—and postulates and must, in the last resource, be resolvable into them; so all the higher developments of thought and reason are based upon, and resolvable into, those beginnings of knowledge which he called intuitions.

Now, the mind not only does achieve these intuitions, but it has, so to say, a longing and a desire to form them as often, and as much, as possible. Man has an inborn, instinctive, tendency to exercise, to the fullest extent, each and every power he possesses. As Pestalozzi so well expresses it: "We attain all our knowledge through the infinite charm that the tree of knowledge has for the sensibility of our nature" (*How Gertrude Teaches*). This instinct for activity is aroused and augmented by every influence which acts upon it, as well as by its own native impulses.

Hence we may say that the learner is, in a sense, able to create out of his own activities an organised body of knowledge about life. Education, from this point of view, is simply the art of assisting nature in its efforts after its own development. This is the reason for saying that thought must be developed from thinking. Thought can only grow out of what it is into what we wish it to be—its better, and best, forms. We must

start all intellectual (and other) progress from the beginnings which the child makes—inevitably and necessarily makes—for itself, whenever the right conditions are present.

“It is life that educates,” must be the foundation principle of all true education, *i.e.*, such as is in harmony with Nature. The mere opening of the eyes, hearing of sounds, touching of things, and so on, are all educative processes; but they are not necessarily the best, or even a good, form of education. The educator is to the education of life, what the gardener is to the garden: he removes the weeds and all injurious things; and provides, as far as possible, every good and helpful condition for the fullest living and the best growth. But the growth and all that is produced is of the living organism; the man can only influence the growth and the products—towards perfection—by making the conditions the best possible.

Knowledge comes, through intuitions, in several different ways, *viz.*, (1) *By Accident, i.e.*, from any and every impression which may influence the individual as he goes through life. Knowledge so gained is, necessarily, more or less irregular, confused, of slow growth, and limited. (2) *From Environment, i.e.*, the special conditions which immediately surround a person. This is largely determined by parents and teachers, and its value will depend upon their knowledge and skill in ordering and using the surroundings. (3) *From Study, i.e.*, the self-directed search for knowledge. Perceptions thus gained are of the highest possible value in themselves, and will qualify us for self-education. (4) *From Occupation*, which gives us chiefly moral perceptions, or ideas of duty, virtue and justice. We are also much helped towards

clear ideas by knowledge gained in this way. (5) *From Analogy and Reasoning*, by which we are able to judge of the nature of things which have never directly acted upon our minds, by making a constructive (reasoned) use of the knowledge which we have gained from immediate impressions from things. We are able to get knowledge from knowledge; e.g., a child who has learned to observe with elementary accuracy only a few farm-houses, and accurately to express such observations in words, has thereby got to know the essential parts of architecture, and can apply his ideas to the understanding of buildings which he has never seen (*How Gertrude Teaches*).

Knowledge passes through several stages, *viz.*, from confused to definite perceptions; from definite to clear perceptions; from clear perceptions to distinct ideas. This development in the perfecting of our ideas is brought about by grouping, separating and comparing the objects of perception. Objects often impress us in such a way that only some of their unimportant or accidental qualities become known to us. Thus we may be led to form very wrong, or misleading, ideas about them; but by grouping objects which have the same essential qualities, our insight into their real nature is made more complete and correct, and we are much less likely to be led astray by single impressions.

By separating and comparing objects we are able to arrive at the simplest elements of our perceptions—and the most complex perception can be thus reduced to its simplest elements—and so to raise our definite and clear conceptions to distinct ideas. There is no need to force all this on the learner, for the mind itself is so constituted that it involuntarily and irresistibly desires

thus to obtain distinct ideas. All that is required is that sufficient help should be given to enable the pupil to do this with the greatest certainty of success.

Since intuition is the foundation of all knowledge and, therefore, of the higher intellectual processes, *viz.*, judgment and reasoning, it is most important that our intuitions should be accurate. No judgment or reasoning can be sound and complete unless the intuitions upon which it is founded are full and perfect. No higher step should, therefore, be attempted until the lower ones are thoroughly known. We must first get a complete mastery over the simple elements, and a facility in the use of them, before going forward to something more complex. We must proceed step by step; each step being only a very slight addition to the previous one.

Observation is the great instrument in the formation of perceptions [of external things]; and care must be taken to observe the best and most characteristic specimens of any class of things, *i.e.*, such as will give a correct idea of the real thing and of its most important qualities. For example, a lame, one-eyed, or six-fingered man would not convey a proper idea of the human form. When a suitable specimen has been properly observed, there arises the necessity of naming it; after naming it we proceed to discover its parts and properties, and name these, *i.e.*, describe the object; and, finally, from a clear description of it we draft a definition, *i.e.*, an expression of the distinct idea of the object. The accuracy and value of the definition will obviously depend upon the fulness and exactness of the observation and description; and these will, in turn, depend upon the vitality and wisdom of the method of training of the children to habits of observation.

Pestalozzi gives an emphatic warning against the great danger of substituting mere talks for real observations. He says: "It is a mere fallacy to conclude, or to pretend, that knowledge has been acquired from the fact that terms have been memorised, which, if rightly understood, convey the expression of knowledge. This condition *if rightly understood*, which is the most material, is the most generally overlooked. . . . To guard against an error of this kind, the first rule is to teach always by things rather than by words. Let there be as few objects as possible named to the child, unless you are prepared to show the objects themselves. . . . Of objects which cannot be brought before the child in reality, pictures should be introduced" (*On Infants' Education*).

We should not, in the early stages, make use of any truths which are not the outcome of our own intuitions. Every truth which is presented to the learner through verbal forms, and is not based in its essential elements on his own perceptions, remains, so to say, in the air—it has no means of really and truly connecting itself, in the child's mind, with that to which it relates. Endless truths so presented to the mind have far less educative influence on the development of thought than a single one based upon actual perception.

Pestalozzi sums up by saying that he found "that all our knowledge proceeds from three elementary powers: (1) from the power of making sounds: the origin of language; (2) from the indefinite, simple sense-power of forming images, out of which springs the consciousness of all forms; and (3) from the definite, but no longer mere sense-power, of imagination, from which must be derived the consciousness of unity, and therewith the ability

for calculating and reckoning. . . . The art of educating the race must be based upon the first and simplest results of these three foundation-powers: sound, form and number . . . recognised by Nature herself as the common starting-point of all instruction.

“In consequence of this recognition they must be incorporated in forms which, universally and harmoniously, arise from the results of the three elementary powers of our nature, and which tend, essentially and surely, to make all instruction a steady and unbroken development of these fundamental powers, used in common and regarded as equally important. Only in this way is it at all possible to lead us, in all three branches, from obscure to definite sense-impressions, from definite sense-impressions to clear images, and from clear images to distinct ideas. Here . . . I find the Art [of Education] . . . a common basis of all the methods and arts of instruction. . . . Through knowing the unity, and form, and name of any object, the knowledge of it becomes *precise*; by gradually learning its other attributes the knowledge of it becomes *clear*; and through consciousness of its totality the knowledge becomes *distinct*” (*How Gertrude Teaches*).

In building up complete perceptions—the results of complete sense-impressions of all the parts of an object—the following points should be observed: (1) The process should be very gradual, and each step completely and indelibly fixed in the mind. (2) All our perceptions should be related in our minds in a way exactly resembling the relation of the actual objects in nature. (3) All subordinates and non-essentials in real things should be represented in our minds by perceptions which are regarded as subordinates and non-

essentials. (4) Impressions of important things should be made clearer and stronger by bringing the objects near and letting them act on the various senses. Let it not be forgotten, *e.g.*, that the perception of size depends upon the nearness or remoteness of physical objects. (5) All actions of physical things should be regarded as absolutely necessary: as the manifestations of the power which unites the seemingly diverse elements which compose things, and which acts so that the things may fulfil their proper functions. (6) Regard this physical necessity as, nevertheless, having the elements of freedom and independence.

Pestalozzi believed that these steps in the development of complete perceptions are based upon the essential laws of nature, and have, collectively, a threefold source. The first source is nature itself, through the power of which the mind rises from vague sense-impressions to clear ideas. Herein are the foundations of the laws which give these educational principles. (1) All sense-impressions, in so far as they come from the essential nature of an object, help to form correct ideas; whilst in so far as they belong to the accidental qualities of an object they are sources of error; (2) to correct ideas thus formed, and firmly impressed on the mind, many related sense-impressions can be easily—as it were involuntarily—added; (3) the more strongly a correct idea is impressed, the more easily it develops rightly: and the more strongly a wrong idea is impressed, the more it develops wrongly; (4) by associating like ideas, gained from like objects, insight into their inner truth becomes essentially and universally deeper, clearer and surer: one-sided and biassed impressions are thereby weakened; and incomplete and

wrong views are avoided; (5) the most complex sense-impressions are based upon simple ones: make clear the simple, and the complex will become simple; (6) the more senses employed in getting impressions of a thing, the more accurate will be the knowledge of it. These truths rest upon the nature of physical things and the nature of the mind.

The second source is the power of sense-impression, which is intimately interwoven with the sensibility of our nature. This acts in two ways: firstly, in our desiring to experience and know everything; and secondly, in our desiring to enjoy everything. The former stimulates to activity whilst the latter tends to passivity; and they, so far, counteract each other. The former arouses curiosity, whilst the latter secures an opportunity for calm judgment. The former collects knowledge, the latter ripens it.

The third source lies in the relation of our outer circumstance to our perceiving-power. Man, so to say, makes his own world out of the circumstances by which he is surrounded: he learns all the realities of the world, in their merely physical aspects, wholly in the measure that the objects of the world which come to him through intuition [sense-impression] approach the centre in which he spins and weaves—for he is like a spider which is bound to the centre of the web which he spins himself. Growth is adaptation to environment.

This outline, drawn from *How Gertrude Teaches*, gives us a bird's-eye view of Pestalozzi's educational psychology. He endeavours to work out these laws and principles in his methods of teaching, and we can better understand what he means by them by discovering how he applies them to practical education. The correspon-

dence of his views with those of modern psychologists—always remembering that Pestalozzi was a pioneer—concerning the following points, is well worth particular attention: that the law of evolution prevails in all things: that development is organic and genetic: that ideas are developed through sense-impressions and percepts: that sense life is a susceptibility to external influences and all mental life is a striving to know: and that all growth is an adaptation to environment.

From the consideration of the general laws of nature and mind, so far as they concern the processes of education, Pestalozzi proceeds to what he regards as the laws which govern the action of mind as a thinking organism.

The most potent means for making our perceptions clear and distinct, is the use of our knowledge of number, form and language. When a confused mass of objects is brought to our notice, we can only hope to make it clear and intelligible to ourselves by asking: (1) how many things, and how many kinds of things, are there? (2) what is their appearance: their shape or outline? and (3) what are the names and words which describe each? The reason for this, says Pestalozzi, is that "All possible objects necessarily have number, form and name; but the remaining properties which the senses enable us to perceive are not possessed by an object in common with all others, but one property is shared with one object, and another property with another object". He adds that all the other qualities of things, which are made known to us by the senses, can be directly connected with the three elements: number, form and language. These are, according to Pestalozzi, the Necessary Forms of Thought.

In his letters *On Infants' Education* he writes about

“those exercises, which were adopted at my suggestion, as calculated to employ the mind usefully, and to prepare it for further pursuits, by eliciting thought and forming the intellect. I would call them preparatory exercises, in more than one respect. They embrace the elements of number, form and language; and whatever ideas we may have to acquire in the course of our life, they are all introduced through the medium of one of these three departments.

“The relations and proportions of number and form constitute the natural measure of all those impressions which the mind receives from without. They are the measures, and comprehend the qualities, of the material world; form being the measure of space, and number the measure of time. Two or more objects, distinguished from each other, as existing separately in space, pre-suppose an idea of their forms, or in other words, of the exact space which they occupy; distinguished from each other as existing at different times, they come under the denomination of number.”

Speaking of the foundation idea—*Anschauung*—of all Pestalozzi's thought and work, Herbart calls it “the grand idea (*Anschauung*) of the genial, the noble Pestalozzi”. He adds: “The discoverer has worked out the same for only a narrow sphere, that of elementary education; it belongs, however, to the whole of education, but it needs for that an extended development”. Herbart himself endeavoured to supply this extension in his educational writings.

VI. The Work of the Teacher as Educator.

From Pestalozzi's theories and principles of education it is quite clear what the function of the true educator

is ; but Pestalozzi has also told us in set terms what he considers it to be. It will be sufficient for us to give extracts from his writings, leaving the reader to relate them to what has gone before.

The educator's work consists "in a continual benevolent superintendence, with the aim of calling forth all the powers which Providence has implanted in man. . . . Giving a helping hand to the instinctive efforts after self-development.

"The art of instruction consists in removing the confusion of the indefinite succession of preceptions, by distinguishing the objects from each other, and reuniting those that are analogous or related to each other, in one idea, which is to comprehend them all ; and present them to the mind in that clearness and distinctness which is obtained by separating their essential and common properties from the accidental peculiarities of each single object. First he must detach each perception from those with which it is, in nature, interwoven ; then he must [get the child to] observe each single perception through all the variations and changes to which it is liable ; and, lastly, he must [get the child to] determine its proper place in the circle of knowledge which has been already acquired ; so that he advances progressively from confusion to distinctness, from distinctness to clearness, and from clearness to insight" (*How Gertrude Teaches*).

In connection with this selective function of the educator Pestalozzi gives an interesting concrete example. He says that it is undesirable for children to go into the woods and meadows in order to learn about trees and plants. "Trees and plants do not there stand in the order best adapted to make the character of each class

apparent ; and to prepare the mind by the first impressions of the objects for a general acquaintance with this department of science " (*How Gertrude Teaches*).

The only way to help children " to a real development of their mental faculties is : (1) Gradually to enlarge the sphere of their intuition, *i.e.*, to increase the number of objects falling under their own immediate perception. (2) To impress upon them those perceptions of which they have become conscious with certainty, clearness and precision. (3) To impart to them a comprehensive knowledge of language, for the expression of whatever has become, or is becoming, an object of their consciousness, in consequence either of the spontaneous impulse of their own nature, or of the assistance of instruction " (*How Gertrude Teaches*).

The educator must find out the objects best suited to call forth every sense : the actions which shall arouse the activity of every faculty of the child : the proper gradation of the simplicity and complexity of such objects and actions, so that they shall be in accordance with the increasing capacity of the senses, and the extension of the powers. Both objects and actions should be presented in attractive, powerful and pleasant forms. If this be done the effects will be most truly educative ; and the child will be as animated and happy in its school hours as in its playtime. If the food necessary for fulness of life is properly presented it is only necessary to lead children, never to drive them, to it.

Since the beginning of the human race, men have been trying to make easier the progress of the learner from the elements of the culture of the power of intuition to the elements of the culture of the power of thought ; and at raising the common sense which is gained by the

simple perception of objects of Nature to the level of the logical certainty of the power of thought and judgment. The educator has to continue this.

The work of the educator is to see that the child's human instincts are exercised in human affairs; and to do this by causing self-activity and self-realisation from within, not by dictating or enforcing a cut-and-dried system from without. He must secure the positive quickening of what is good; not the mere repression of what is evil, in the child. Truth must be so cultivated that falsehood is, as it were, crowded out: the intellectual and moral powers must be made so strong that the sensuous powers are overwhelmed. In the mind of the educator there must always be the clear and conscious aim of serving the divine nature in the child, so as to help it to its full development, and in no way to hinder or harm it. But the educator must serve only the life and the law of the child's nature, not its whims or its personal preferences.

Instruction must be given through a series of exercises so graduated by the educator, that the starting-point is, in every case, well within the comprehension of the pupil; and the consecutive progress through the series must always exercise the pupil's powers, without exhausting them, so that there is a continuous, easy and attractive progress, in which knowledge and the practical application of it are always closely connected.

In concluding this study of Pestalozzi as a thinker we will give five outline summaries of his theory of education. Three of these are by men who knew Pestalozzi well, and worked with him—Fischer, Niederer and Dr. Mayo; and two of them are by able commentators on Pestalozzi's theories—Morf and Payne.

FISCHER.

1. To give the mind an intensive culture, and not simply extensive: to increase the strength and skill of all the powers of the mind, and not to content oneself with furnishing it with many and various ideas.

2. To furnish the mind with fundamental data, mother ideas, for all its operations.

3. To connect all instruction with the study of language.

4. To simplify the mechanism of instruction and study.

5. To popularise science.

NIEDERER.

1. The *aim* is the development of man as a whole, with all his moral, physical, and intellectual powers; the particular lines of the development depending upon his position in the world—in other words, upon the actual life that awaits him.

2. The *starting-point* of the exercises in instruction is to be found in the notions the child has already acquired, in his present tastes, needs and powers.

3. The *connection* of the exercises in instruction is the order in which they follow each other, which order must be so carefully graduated that each exercise shall give the child the desire and the power to do the next.

MAYO.

1. Education should be essentially religious: Its end and aim should be to lead a creature, born for immortality, to that conformity to the image of God in which the glory and happiness of immortality consists.

2. It should be essentially moral—Moral instruction, to be availing, must be the purified and elevated expression of a moral life, actually pervading the scene of education.

3. It must be directed by an influence essentially parental.

4. It should be essentially organic—the development of the human faculties (moral, intellectual and physical) from within, by a process of expansion and growth; through self-activity and liberty.

5. The development of all the faculties should be harmonious: to preserve the equipoise within the mental, moral and physical spheres, and between the three.

6. It should be based on intuitions.

7. It should be gradual and progressive—every age has its own mental, moral and physical claims.

8. It should be free and natural, not cramped, confined and servile.

9. It should be analytical—everything taught should be reduced to its simplest elements.

MORF.

1. The foundation of instruction is intuition [*Anschauung*, *i.e.*, the effect of outward objects on the senses, and the effect on the consciousness of the impressions made on the senses by outward objects].

2. Language must be connected with intuition.

3. The time for learning is not the time for judging and criticising.

4. In each branch, instruction must begin with the simplest elements, and proceed step by step according to the development of the child, *i.e.*, by a sequence of steps which are psychologically connected.

5. Instruction must follow the path of development not that of lecturing or telling.

6. Instruction must be subordinated to the end of education.

PAYNE.

1. The principles of education are not to be devised *ab extra*; they are to be sought for in human nature.

2. This nature is an organic nature—a plexus of bodily, intellectual and moral capabilities, ready for development, and struggling to develop themselves.

3. Self-development begins with the impressions received by the mind from external objects. These impressions (called sensations), when the mind becomes conscious of them, group themselves into perceptions. These are registered in the mind as conceptions or ideas, and constitute that elementary knowledge which is the basis of all knowledge.

4. All education (including instruction) must be grounded on the learner's own observation (*Anschauung*) at first hand—on his own personal experience. This is the true basis of all knowledge.

4 (*cont.*). First the reality, then the symbol; first the thing, then the word, not *vice versa*.

5. That which the learner has gained by his own observation and which, as a part of his personal experience is incorporated with his mind, he *knows* and can describe or explain in his own words. His competency to do this is the measure of the accuracy of his observation, and consequently of his knowledge.

6. The education conducted by the formal educator has both a negative and a positive side. The former consists in removing impediments, so as to afford scope for the learner's self-development. The latter is to stimulate the learner to the exercise of his powers, to furnish materials and occasion for the exercise, and to superintend and maintain the action of the machinery.

7. Personal experience necessitates the advancement of the learner's mind from the near and actual, with which he is in contact, and which he can deal with himself, to the more remote; therefore from the concrete to the abstract, from particulars to generals, from the known to the unknown. This is the method of elementary education; the opposite proceeding—the usual proceeding of our traditional teaching . . . is the scientific method—a method suited only to the advanced learner, who, it assumes, is already trained by the elementary method.

MORF.

7. The instructor must dwell upon each step long enough to ensure that the child gets a thorough grasp of, and control over, the new matter.

8. The chief aim of elementary instruction is to develop and increase the powers of the child's mind, not the acquisition of knowledge or skill.

9. With knowledge must come power, with information skill.

10. The relations between educator and pupil, and school discipline in particular, must be based on and controlled by love.

11. The individuality of the pupil must be sacred to the educator.

PAYNE.

8. Practical aptness or faculty, depends more on habits gained by the assiduous oft-repeated exercise of the learner's active powers than on knowledge alone. Knowing and doing must, however, proceed together. The chief aim of all education (including instruction) is the development of the learner's powers.

9. Spontaneity and self-activity are the necessary conditions under which the mind educates itself and gains power and independence.

CHAPTER XI.

PESTALOZZI'S METHODS OF TEACHING LANGUAGE, FORM AND NUMBER.

IN describing the methods which Pestalozzi used in teaching the above subjects, we shall take the subjects in the order of importance and value which he appeared to attach to them. "The impression made on the senses by form and number precedes the art of speech, but the art of sense-impression and arithmetic come after the art of speech." Although he says that "whatever ideas we may have to acquire in the course of our life are all introduced through the medium of one of these departments," *i.e.*, number, form and language; this does not mean, as it at first seems to suggest, that reading, writing and arithmetic are to be regarded as the foundations of education.

Notwithstanding the fact that he says that "Upon these three fundamental points [number, form and language] all elementary instruction is to be built: and it is evident, therefore, that the object of our first exertions in education must be to develop and strengthen, in that manner which is most conformable to nature, the faculties of number, of form, and of language, since upon the healthy state, as it were, of those faculties, the correctness of our perceptions essentially depends"; his experience convinced him that reading, writing and

arithmetic, far from being the foundation elements of instruction, ought to be regarded as subordinate ones. "It is well done to make a child read, and write, and learn, and repeat—but it is still better to make a child think" (*On Infants' Education*).

This apparent contradiction is easily explained: the elements of knowledge in number, form and language must first be learned, before they can be used in getting further knowledge. How are these to be learned? As we shall see, when dealing with them, they are to be learned through acquiring and developing intuitions, *i.e.*, by means of what we now call object lessons. The "Three R's" are taught through object lessons: therefore the latter is primary, and the former secondary. As Pestalozzi puts it: "There are two ways of instructing: either we go from words to things, or from things to words. Mine is the second method."

I. Language-Teaching—or the Teaching of Sound through Object Lessons.

Pestalozzi says: "In teaching the child language we ought to follow the same course which nature took. Nature undoubtedly began with intuition. The first simple sound by which man attempted to communicate the impression produced upon him by some object, was the expression of an intuition. . . . From this point language gradually advanced: man began to observe the characteristic features of those objects to which he had given names, and to form words to designate their proportions, their actions, and their powers. It was not until a much later period that he invented the art of modifying one and the same word according to number, time, and so on." Again: "The savage first

names the object, then draws it, and then connects it very simply—after first learning its qualities, varying according to time and circumstance—with words, through terminations and combinations, so as to be able to define it more closely” (*How Gertrude Teaches*).

Before children are ready to learn to read, they must have learnt to talk; and to do this they must be taught to feel and to think. There must be a considerable development in general knowledge, through perceptions; and in knowledge of language, through speaking; before we begin to teach reading or letters. The study of language is analysable into: (1) the study of sounds, *i.e.*, phonetics by which the several organs of speech are developed; (2) the study of words, *i.e.*, the means of teaching a knowledge of individual objects; and (3) the study of speech, *i.e.*, the means of teaching composition, or the correct method of expressing all that is known about objects and their qualities. Language thus taught has its highest value in helping the learner to clearness of conception. The ignorance of the lower classes is mainly owing to the fact that they have not thus been taught how to speak.

The development of the faculty of language is inseparably associated with the development of the faculty of intuition. It is only as a child gets fuller and more exact intuitions that he can get a greater and more precise use of language. The way to extend a child's command of language is to increase and quicken his power of intuition. The mere sounds of language are empty and barren; it is only when they are consciously connected with the contents of intuitions that they become true human speech. Here also it is life that educates; and the training in language, that is in

intuition, must be directly connected with the home-life and ordinary activities of the learner.

Teaching in the rules of grammar should come at the end of the study of language, not at the beginning. Our first business is to learn how to talk, and how to understand talk, in the above-mentioned sense. The rules of grammar will enable us to test our attainments in these two points.

Language is a connecting link between intuition and thought proper: "Intuition and thought are separated by a great gulf which can be bridged over only by speech" (*Swan's Song*). All advanced and complex thought is dependent on language, just as higher work in number is dependent on algebraic symbols. The three faculties of perception, language and thought constitute the sum of the means of intellectual education. Pestalozzi's own words are: "The mind is deprived of its first instrument or organ, as it were, its functions are interrupted, and its ideas confused, when there is a want of perfect acquaintance and mastery of at least one language. . . . The child cannot become distinctly conscious of its intuitions and impressions of Nature without language" (*On Infants' Education*).

The direct connection of intuition with the study of language is seen in the fact that the naming of objects gives us nouns; the words which express the qualities of objects are adjectives; the words which express the movements, etc., of things are verbs; and so on for the other parts of speech. We acquire, through language, the ability to define the qualities of things; and to make changes in these—caused by change of conditions—clear to ourselves, by changing the words themselves and their arrangement. A proper system of teaching

language will, without using any of the technical terms of grammar, yet give all the facts of grammar through developing intuitions of objects.

Pestalozzi's method was to take from the dictionary the names of certain common things, and also those words which described the most striking qualities possessed by the things—nouns and adjectives—as a basis for a lesson. His theory was that, in this way both intuitions and language can be extended and strengthened at the same time; *e.g.*, observation and expression (both involved) will give: *the eel* is slippery, worm-shaped, leather-skinned; *the evening* is peaceful, cheerful, cool, rainy; *the field* is sandy, clayey, sowed, manured, fertile, sterile. Or we can proceed from the adjectives as a basis for calling up in the mind such things as give the impressions associated with these words, thus: *round* (given)—bullet, hat, moon, sun (recollected); *light*—feather, down, air; *high*—towers, mountains, giants, trees.

For such exercises in language Pestalozzi used both objects and pictures. He says that these "pictures are selected with a view to present to the child's mind all the chief varieties of objects and their properties, so far as they fall within the reach of our five senses. As to those properties which become known to us only by the intervention of judgment and imagination, I exclude them from my plan of instruction at this period. I am aware that many words denoting such properties will necessarily be caught up by children from the conversation of others, which may have the advantage of setting their imagination to work and awakening their curiosity. For the express purpose of our instruction, however, we should confine ourselves to such objects as are im-

mediately perceptible by our senses, with a view to bring the child as early as possible to a clear and precise expression, in language, of whatever may be the result of his observations. . . .

“A few instances in each case are sufficient, and the teacher may immediately proceed to the question : ‘What else do you know that is round, or light?’ etc. The children generally find new examples within the sphere of their own experience, and very frequently such as the teacher would never have thought of; and being repeatedly called upon to give an account of their knowledge, they acquire a facility and a distinctness of expression which no Socratic conversations, unless conducted with a hundred-fold degree of skill and labour, can ever produce” (*How Gertrude Teaches*).

To get enlargement of ideas and enlargement of sentences, at the same time, Pestalozzi would elicit from the children definitions and descriptions of objects and actions; *e.g.*, “*A bell* is a hollow round vessel of cast metal, open at the bottom, mostly with the brim bent outwards; towards the top it grows more and more narrow, approaching the oval shape; it is generally suspended free in the air, with an iron tongue hanging down perpendicularly from the centre of the top, which, when the bell is swung from one side to the other, strikes against the brim of the vessel, and thus produces the sound which is called the ringing of the bell; *To walk* is to move on, step by step; *To stand* is to rest the body on the legs, in a perpendicular position; *To lie* is to rest the body on the ground, on the bed, etc., in a horizontal, or nearly horizontal position,” etc. Sentences were also formally extended, on the basis of real knowledge and through a particular word; *e.g.*, “I

shall ; I shall retain ; I shall not retain my health otherwise ; I shall not retain my health after all I have suffered during my illness otherwise ; I shall not retain my health, after all I have suffered during my illness, otherwise than by practising the greatest temperance". Such exercises, he held, should be instructive in themselves : suitable to the circumstances of the pupils : and likely to arouse good feelings in the learner. They should be so ordered and arranged that they help to satisfy the child's natural longing for, and need of, knowledge, in the best and most complete way.

It must be remembered, Pestalozzi points out, that the above is a system for assisting Nature in her own work and way. In actual order of life the child learns through complete phrases, which at first only give him a glimmer of meaning, but this becomes more and more clear as time goes on. Words in a sentence help to explain each other, when the general meaning of the whole is, more or less, grasped. It is for this reason that sentences are far more easily remembered than detached words, which, of themselves, have no necessary connection with others. We learn things as wholes, in the first instance, and then analyse them into parts so as to get greater clearness and fulness—clear perceptions and distinct ideas.

Spelling and Reading. Sooner or later we must begin to deal with the forms by which language is symbolised, and must therefore fix upon a method. Pestalozzi gives this account of the way in which he arrived at his methods : "When I had begun to teach reading, I found out, after a while, that my pupils wanted first to be taught speaking ; and when I set about trying how I could accomplish this, I came at

last to the principle of following the progress of nature in the composition of single sounds into words, and words into speech. . . . When I attempted to teach spelling I felt the want of an appropriate book for the earliest childhood ; and I conceived the plan of one by the aid of which I have no doubt that children, of three or four years of age, might be brought to a degree of real information far superior to that which is commonly acquired at school about the age of seven or eight years. . . .

“ It is not to be left to chance at what time, and to what extent, the child shall become acquainted with each sound. An early and complete knowledge of them all is of great importance. This knowledge he should have before he is able to pronounce them ; and in like manner he should be able to pronounce them, generally with ease, before he be introduced to the knowledge of written or printed characters, and taught to read.

“ The spelling-book ought, therefore, to contain all the sounds of the language, and these ought to be taught in every family from the earliest infancy. The child who learns his spelling-book ought to repeat them to the infant in the cradle, before it is able to pronounce even one of them, so that they may be deeply impressed upon its mind by frequent repetition. It is incredible to those who have not seen it, how much the attention of babes is excited by the repetition of a few simple sounds, and their combinations, such as : ba, ba, ba ; da, da, da ; ma, ma, ma ; la, la, la, and so on. But the charm which it has for them is not the only advantage, for it contributes to the development of their faculties, and prepares them for future greater exertions. . . .”

Again : “ Mothers are invited to repeat those succes-

sions of sounds to their children several times a day, even before they are able to speak, and to vary the order in which they repeat them, so as to stimulate the attention, and, by the contrast of the different sounds with each other, to produce a distinct knowledge of the peculiar character of each. This repetition is to be renewed with double zeal when the children begin to speak, that by imitating those sounds they may the more readily develop their organs" (*How Gertrude Teaches*).

But all this must be based upon and preceded by exercises in intuition. If this be forgotten the method cannot be understood, and will appear to be the most mechanical of mechanical systems. In this, as in all else, Pestalozzi would have us go from experiences to ideas, and from ideas to words, even when learning spelling. To this end he says that "a firm conviction gradually developed in me: (1) of the necessity of picture books (intuitive books) for early childhood; (2) of the necessity of a fixed and precise exposition of these books; (3) of the necessity of a guide to the names and word-knowledge based upon these books and their expositions, with which the children should be made familiar, long before the time for beginning to spell" (*How Gertrude Teaches*). Talking must come before spelling, and the child is to have nothing to do with words, in the first instance, except in connection with things. This is very clearly shown in the following extracts.

"You see what objects God presents to your child as soon as he opens his eyes; you see the effect of his involuntary and, so to say, inevitable intuitions; you see what pleases and amuses him. Let all your conduct

be guided by what you thus see; take your child near the object which catches his notice and attracts him most strongly; show him his favourite objects again and again; search everywhere within reach—in the garden, the house, the fields—for those things which, by their colour, shape, movement, or brilliance, are most like to those things he likes best. Surround his table with them and place them on the table where he takes his meals. Give him plenty of time in which to examine their qualities, at his ease; and let him observe that by putting fresh flowers into the vase where others have faded, by calling back the dog, or by picking up the fallen toy, you are often able to replace what often disappears.”

Again: “I wish always to let sense-impressions come before the word, and definite knowledge before judgment. I desire to make the effect of words and talk on the mind of little account, and to secure that dominating influence proper to the actual impressions of physical objects, which forms such a notable protection against mere babble and empty talk. I wish to lead my child, from his earliest development, into the whole circle of nature which surrounds him; I would organise his learning to talk by a collection of nature’s products. . . .

“The next step to be taken is to make the child pronounce those sounds, as distinct exercises, to be gone through several times a day, but with the same ease and playfulness with which children are generally made to imitate sounds; the only difference being that the mother follows the regular course traced for her in the spelling-book, instead of taking the sounds at random as they occur” (*How Gertrude Teaches*).

Pestalozzi’s spelling-book was built up on the plan of

combining (1) all the vowels with all the consonants, in a progressive order, thus: ab, ad, af, ag, etc.; then the reverse order, ba, da, fa, ga, etc.; so with eb, ed, etc. (2) Next more difficult syllables are formed by putting a consonant both before and after a vowel, thus: a, ap, pap, lap, etc. "Each syllable spelt in this manner is to be pronounced by the teacher and repeated by the children, until it is indelibly impressed upon their minds. After this the teacher asks for each letter separately, and independently of the order in which they stand (the first? the third? etc.), and, lastly, he covers one syllable after the other with his hand, and makes the children spell it from recollection." (3) When the previous exercises are thoroughly mastered, the words may be learnt, thus: f, fe, fen, fende, fender; afterwards in the reverse order: r, er, der, nder, ender, fender. (4) "Another exercise is to divide the word into syllables, which the children are to count, to spell, and to pronounce, first in the order in which they stand, and then promiscuously as the teacher points them out. . . .

"The exercises before mentioned being gone through on the spelling-tablet, or otherwise, with the pasteboard letters, the book itself is to be put into the child's hands as his first reading-book, and he is to continue in it till he has attained perfect facility in reading all the exercises." The pasteboard letters here referred to are those used in teaching the letters. "In order to facilitate the knowledge of the written characters, which ought to precede the exercise of spelling, I have appended to the spelling-book an alphabet, in which the letters are of considerable size, so as to present their differences to the eye in a more striking manner. These letters are to be pasted, each separately, on stiff

paper, and given to the child one after another. The vowels are in red ink, to distinguish them from the consonants, and the latter are not to be taken in hand until the child be perfectly familiar with the former" (*How Gertrude Teaches*).

This brings the pupil to fitness for learning the formation of sentences, *i.e.*, "the determination of the objects, their properties and different states, according to time and other relations in which they are placed". And this gives us "the outline of a practical grammar, by the progressive exercises of which the child is brought to the ultimate object of instruction, *viz.*, perfect clearness of ideas. The first step of this instruction is to teach the child to speak correctly." The mother is to give a model sentence and the child is to repeat it after her until it is perfectly known. Sentences such as: "Papa is kind; the cow is tame; the fir is tall," etc., are to be given, and when the child says them easily and correctly, the mother should then ask: "Who else is kind?" etc. "What else is papa?" etc. Following this would be such exercises as: "Who or what, *are* what?—Roots are tough; who or what, *has* what?—The dog has a fine scent; Who or what, *have* what?—Plants have roots; Who *wishes* what?—The hungry wishes to eat; Who *wish* what?—Children wish to play; Who *can* what? (singular)—The bird can fly; Who *can* what? (plural)—Tailors can stitch," and so on.

"In this manner I continue these exercises, both in the singular and the plural, through the whole round of declensions and conjugations; and, with special reference to the verb, I continue as follows. First I form the simple connection between the verb and the object;

e.g., attend to the teacher's words; *breathe* through your lungs; *bind* a sheaf, a stocking, etc. The next exercise adds a subject to the verb; *e.g.*, *attend*: I attend to the teacher's words, to my duty, to my welfare; a person who *attends* to things is *attentive*; a person who does *not attend* to anything, or only to a few things, is *inattentive*; I ought to *attend* to myself more than to anything else" (*How Gertrude Teaches*).

Such exercises have two ends in view, *viz.*, (1) to cultivate the organs of speech (vocalisation, pronunciation), and the art of speaking (oral composition); and (2) teaching the formation of sentences (in the above-mentioned sense). These two ends must always be kept perfectly distinct and separate, and each must be perfected by, and in, itself, even though the same sentences may be used for both. As is said in the *Swan's Song*: "To teach a child to talk we must first cause him to see, hear and touch many things, and especially those which please him, and to which, therefore, he will readily attend. We must also get him to observe them in an orderly way, observing each thoroughly before he goes on to another. At the same time he must be continuously learning how to express his impressions in words." Again: "I connected the art of teaching children to talk with the intuitive-ideas given to them by nature and by art" (*How Gertrude Teaches*).

Pestalozzi's own way of doing this is described in his account of how he taught the little boy—"then hardly three years of age"—at Burgdorf. "I led him to form, concerning every object, distinct notions, and to express these notions clearly in language. Very soon I was obliged to lay aside the alphabet, that first torment of

youth. He felt no interest in those dead signs: he would have nothing but things, or pictures of things: and in a short time he was enabled to express himself distinctly respecting any objects within the sphere of his knowledge. He gathered general information from the street, the garden, and the house; and, upon the basis of clear and self-acquired notions, he soon learned to pronounce correctly even the most difficult names of plants and animals. Nay, by comparing objects entirely unknown to him, with such as he was acquainted with, he was able to form of them a definite idea" (*How Gertrude Teaches*).

In connection with this experiment he arrived at the profound principle that "nature brings the children, even at this age, to a very definite consciousness of numberless objects. It only needs that we should, with psychological art, unite speech with this knowledge, in order to bring it to a high degree of clearness; and thereby enable us to connect both the foundations of many-sided arts and many-sided truths to that which nature herself teaches; and likewise to make use of what nature teaches as a means for the explanation of all the fundamentals of art and truth that one can bring forward" (*How Gertrude Teaches*).

Also in connection with the teaching of spelling and number, at Burgdorf during the same period, he began to work out the great corner-stone idea for his whole system, "The A B C of Anschauung". He says: "I sought in every way to bring the beginnings of spelling and reckoning to the greatest simplicity and method; so that, by the greatest psychological art, the child might pass from the first step gradually to the second; and then without break, upon the foundation of the

fully grasped second, quickly and safely he will be carried on through the third and fourth. . . . With this work the idea of the possibility of an 'A B C of Anschauung' gradually unfolded itself" (*How Gertrude Teaches*).

It is of the highest significance that what is ordinarily regarded as the most mechanical and arbitrary of all school subjects, *i.e.*, spelling, should be one of the two subjects which gave to Pestalozzi the suggestion of the unifying and fundamental principle of his whole scheme of education. To realise the full significance of this fact is to grasp the essence of his theories: to miss it is to misunderstand and mistake his whole work. There is nothing in education, he would have us understand, which cannot, and does not, begin in a real experience on the part of the child—something which must, and does, happen in the course of nature—and which, therefore, must be, as it alone can be, the starting-point of true education.

Much scornful criticism has been passed upon the mechanical nature of the exercises in spelling, etc., in the *Mother's Book*: much of it fully deserved in so far as Pestalozzi has carried his method to mechanical extremes: but most of it mistaken in that it ignores Pestalozzi's underlying assumption that it is all based upon actual intuitions. As he himself so well says: "I cannot prevent the forms of my method from having the same fate as all other forms, which inevitably perish in the hands of men who are neither desirous nor capable of grasping their spirit".

Such is the work of a mother; and Pestalozzi's *Mother's Manual and Guide for Teaching Spelling and Reading* are but skeleton outlines to which the mother

and the teacher must impart flesh, blood and life, so to speak. Every mother, he says, is "able to give her child the possession of a variety of names, simply by bringing the objects themselves before the child, pronouncing the names, and making the child repeat them. She must feel herself able to bring such objects before the child in a sort of natural order, the different parts, for instance, of a fruit. Let no one despise these things because they are little. . . . After she has exhausted the stock of objects which presented themselves first, after the child has acquired the names of them, and is able to distinguish their parts, it may probably occur to her that something more might still be said on every one of these objects.

"She will find herself able to describe them to the child with regard to form, size, colour, softness or hardness of the outside, sound when touched, and so on. She has now gained a material point; from the mere knowledge of the names of objects, she has led the infant to a knowledge of their qualities and properties. Nothing can be more natural for her than to go on and compare different objects with regard to these qualities, and the greater or smaller degree in which they belong to the object. If the former exercises were adapted to cultivate the memory, these are calculated to form the observation and judgment.

"She may still go much further: she is able to tell her child the reasons of things, and the causes of facts. She is able to inform him of the origin, and the duration, and the consequences of a variety of objects. The occurrences of every day, and of every hour, will furnish her with materials for this sort of instruction. Its use is evident: it teaches the child to inquire after the

causes, and accustoms it to think of the consequences of things" (*On Infants' Education*).

The above will enable us to understand how Pestalozzi arrives at his development of language teaching into instruction in (1) sounds, (2) words, and (3) speech, as mentioned above; and how he goes on to subdivide the third branch into (a) the designation of the form and number of every object; (b) the designation of all the other properties of objects, whether they be discovered by our senses, or by our imagination and judgment; and (c) the determination of the objects, their properties and different states according to time and other relations in which they are placed, with a view to still further illustrate all that the child has before learned concerning the nature, powers of action, and so on, of each object. This leads to the outline of a practical grammar.

Under the second of these subdivisions he includes a very wide range of knowledge. He writes: "I now distinguish the treasures of language which are, as it were, the testimony of past ages concerning the universe, under the following heads: (1) geography, (2) history, (3) physical science, and (4) natural history. But in order to avoid useless repetitions and to make the course as short as possible, I subdivide these four heads at once into about forty sections, and present to the child the names of different objects only in these subdivisions. I then take up the particular object of our observation, man himself, and arrange the whole of what language contains concerning him under the following heads: (a) man as a merely physical or animal being; (b) man as a social, and still animal, being; and (c) man as a moral and intellectual being, raised above the level of animal existence. These three

heads I again subdivide into about forty sections, comprehending all that is to be said about man" (*How Gertrude Teaches*). But these elaborate subdivisions were afterwards abandoned "as the results of immature opinions".

In order to bring about a general system of education on these lines Pestalozzi was convinced "that intuitive books for elementary instruction are indispensable". Again, he writes: "I saw, moreover, that in the composition of such books it must be of the highest importance to keep the different parts of instruction distinct from one another, and to introduce them in a manner adapted to the natural progress of the child's mind; for it is only by determining with the greatest accuracy what is calculated for every age and every stage of development, that we shall avoid either withholding anything of which the child is capable, or burdening and confounding him with things which he cannot yet grasp. . . . I was deeply impressed with the want of 'intuitive elementary books,' by the aid of which, long before the spelling-book comes on, children might be made acquainted with those objects of which they are to learn the names, either by their being exhibited to them in reality, or represented in good models and drawing."

Pestalozzi rightly laid the greatest possible emphasis upon the importance of the beginnings of education. In the light of his experiences at Stanz, he says: "Never before had I so deeply felt the important bearing which the first elements of every branch of knowledge have upon its complete outline; and what immense deficiencies in the final result of education must arise from the confusion and imperfection of the simplest beginnings" (*How Gertrude Teaches*).

II. The Teaching of Form.

Language teaching, in all its forms, Pestalozzi calls the first means of elementary instruction; the teaching of form, *i.e.*, measuring, drawing and writing, he calls the second means of instruction. The order in which he places the three is what he would call the natural order. He says: "In endeavouring to teach writing I found that I must begin by teaching my children drawing; and, when I took this in hand, I saw that without the art of measuring there is no drawing". He considered that measuring enables a person to apprehend, exactly and clearly, the outlines of objects; whilst drawing gives the power correctly to represent the outline of objects.

He finds that the attempt to draw is one of the earliest activities of the child. Just as the faculty for imitation leads the child to language and music through the ear, so it is led to drawing through the eye and hand. "Children who show some curiosity in the objects brought before their eyes, very soon begin to employ their ingenuity and skill in copying what they have seen. . . . As soon as they are able to make the attempt, there is nothing so well calculated for this object as some elementary practice in drawing. . . .

"The general advantages resulting from an early practice of drawing are evident to every one. . . . Even in common life, a person who is in the habit of drawing, especially from nature, will easily perceive many details which are commonly overlooked, and form a much more correct impression, even of such objects as he does not stop to examine minutely, than one who has never been taught to look upon what he sees with an intention to

reproduce a likeness of it. The attention to the exact shape of the whole, and the proportion of the parts, which is necessary for the taking of an adequate sketch, becomes a habit, and, in many cases, gives much instruction and amusement" (*On Infants' Education*).

The following passages give an outline of his ideas on, and method in, measuring and drawing. "It is obvious, but altogether overlooked in general, that practical facility in measuring things ought to precede every attempt at drawing; or, at least, that we can draw successfully only so far as we are capable of measuring. The common mode of proceeding, on the contrary, is to begin with an incorrect view and a crooked representation of the object; to expunge and draw again, and to repeat this tedious process until by degrees an instinctive sort of feeling of the proportions is awakened. Then, at length, we proceed to what we ought to begin with, *viz.*, measuring."

He says that this blind blundering into accuracy is due to the fact that artists have thus groped in the dark till they have acquired, "by immense exertion and great perseverance," the trick of it. They are unable to explain their method to their pupils, and so "art has remained exclusively in the hands of a few privileged individuals, who had talent and leisure sufficient to pursue that circuitous road. And yet the art of drawing ought to be a universal acquirement, for the simple reason that the faculty is universally inherent in the constitution of the human mind. . . . For let it be remembered that a taste for measuring and drawing is continuously manifesting itself in the child, without any assistance of art, by a spontaneous impulse of nature. . . .

“In proposing, however, the art of drawing as a general branch of education, it is not to be forgotten that I consider it as a means of leading the child from vague perceptions to clear ideas. To answer this purpose it must not be separated from the art of measuring. If the child be made to imitate objects, or images of objects, before he has acquired a distinct view of their proportions, his instruction in the art of drawing will fail to produce upon his mental development that beneficial influence which alone renders it worth learning.”

It is significant to find that Pestalozzi is in agreement with Ruskin as to the connection between drawing and measuring. Criticising the teaching of drawing in schools, Ruskin says: “The first error in that system is the forbidding accuracy of measurement, and enforcing the practice of guessing the size of objects. . . . The student finishes his inaccurate drawing to the end, and his mind is thus, during the whole process of his work, accustomed to falseness of every contour. Such a practice is not to be characterised as merely harmful, it is ruinous” (*Laws of Fésole*, preface).

To get the progress from vague perceptions to clear ideas Pestalozzi insists upon the use of sense-impressions. The child must draw from nature, since “the impression which the object itself gives, is so much more striking than its appearance in an imitation. It gives the child much more pleasure to be able to exercise his skill in attempting a likeness of what surrounds him, and of what he is interested in, than in labouring at a copy of what is but a copy itself, and has less of life or interest in its appearance” (*On Infants' Education*).

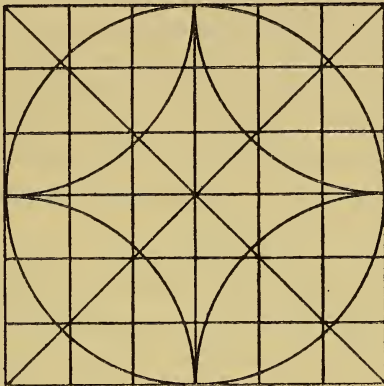
Unfortunately, however, Pestalozzi worked out a very

detailed course of preparatory exercises. He said that it was unreasonable to expect that children should begin drawing an object before they had learned the simple elements of the laws of form, and the art of measuring. The child was to learn the different sorts of lines and angles, and the divisions of the square and circle. This was to be carried on in close connection with drawing, *i.e.*, so soon as the child is able to distinguish, and to draw, horizontal, perpendicular and slanting lines, he is to draw some object which is "bounded chiefly by these lines". The purpose of such preparatory exercises is to teach the learner to judge accurately as to proportions of length, breadth and size of the parts of an object; and to observe accurately the kinds of lines and angles which make up its form: "Children must be taught to read outlines like words, and to name the separate parts of curves and angles with letters, so that their combination can be as clearly expressed upon paper as any word by the joining of letters" (*How Gertrude Teaches*).

All this was unfortunate in that the mechanism of the training became much too elaborate, and therefore hindered and obstructed the higher development. So far did it carry Pestalozzi and his assistants that an *Alphabet of Form* was invented by Buss. This, said Pestalozzi, "furnishes him [the pupil] with terms by means of which he may clearly describe . . . comparing not only the different dimensions of every object that occurs to him, with each other, but also the whole outline with the square, the circle, or their essential divisions and modifications".

The figure given below shows the divisions of the circle and the square, which give the alphabet of

forms. But the alphabet was never published, because fuller investigation and experiment led to modified views. Several courses of drawing were issued from Pestalozzi's institute, of which the best—Dr. Biber says—is that by Ramsauer.



Writing, which has to follow drawing, is to be taught in two stages: "The first when the child is to learn the formation and combination of letters with the [slate] pencil merely; and the second when he is to practise his hand in the use of the pen. In the first course of writing the letters are to be laid before the child according to the precise measure of their proportions; and I have got a set of copies engraved, which, following the successive steps of my method, will almost of itself form a sufficient guide for the child in the practice of writing. It has the following advantages:—

"(1) The child is kept a sufficient time at the drawing of the elementary or fundamental lines of which the different letters are composed. (2) These elementary lines are put together according to a gradual progress,

in which the most difficult letters are placed at the end, and their formation is moreover facilitated by the previous practice of less difficult combinations, to which even the most complicated characters contain only slight additions. (3) The exercise of combining different letters with each other is introduced from the very moment when the child is able to draw one correctly, and is calculated upon the progress in the formation of single letters, so as never to include any but those which have become individually easy and familiar. (4) The book admits of being cut up in single lines, so that the child may place the copy immediately over the line in which he intends writing.

“In this manner the child learns to write with ease and perfection in the first course, and all that remains to be done in the second is to teach him the use of the pen. This is to be done by the same gradual process which was followed on the slate; the letters are to be drawn with the pen on the same enlarged scale which was adopted for the first attempt with the pencil, and to be diminished, gradually, to the usual size” (*How Gertrude Teaches*).

Pestalozzi gives us the reasons why writing should be taught after measuring and drawing: (1) writing itself is a sort of linear drawing, and that of stated forms, from which no arbitrary or fanciful deviation is permitted; (2) the practice of writing, when acquired previously to, and independently of, drawing, spoils the hand and mars its freedom, by confining it to a few peculiar forms on a contracted scale, instead of cultivating in it a general ability for all forms; (3) by the previous acquirement of drawing the formation of the letters is greatly facilitated, and all that time is saved

which children generally spend in correcting bad habits, contracted by a long practice of bad writing, and substituting a good hand for the mis-shaped and incorrect characters to which they have been for years accustomed; (4) the child should learn to do everything in perfection from its beginning, which he will not be able to do in writing unless this acquirement be built upon an elementary course of drawing.

An aid used by Pestalozzi, in teaching writing, is described by M. Fischer: "He gives out thin leaves of transparent horn to each of his scholars. Upon these tablets are engraved strokes and letters, and these serve as models for the beginners, and the more easily so since the pupils can themselves lay them upon the figures they have drawn; and, on account of their transparency, can compare their correspondence with each other."

While he thus shows very clear method and very considerable ingenuity in teaching the mere mechanics of writing, Pestalozzi does not omit to show how writing is related to other subjects through its subject matter. Considered as form, he says, it is connected with measuring and drawing; but it is also a kind of learning to talk: a peculiar and special exercise of this art. Hence, so soon as the child has learnt to make the letters and their combinations, "he needs no more special copies for his improvement in writing. He has the substance for these copies in his head, through his skill in speech and orthography, and he builds up from his own practical knowledge, on the lines of the spelling and reading books, a collection of words through which he constantly improves his speech-skill, and exercises his memory and imagination" (*How Gertrude Teaches*).

In other words, writing includes composition. We learn to write so that we may have another means of expressing our thoughts. Learning to make letters is not writing, but only getting possession of the means for writing. The art will "enable the children . . . to express themselves clearly about every possible thing, whose form and substance may be made known to them, whether by word of mouth or by writing; and firmly impress the knowledge of it. . . . Writing is [to be] perfected not only as an art, but also as a profession" [*e.g.*, the work of a literary man].

It is worth while to notice how modern views on the teaching of writing are returning to the Pestalozzian standpoint: writing being taught through drawing, and in connection with composition. In one point Pestalozzi was much in advance of the present method of teaching penmanship, in that he taught the combination of the letters already learned into syllables and words, before mastering the writing of all the letters in the alphabet.

III. Number Teaching.

In dealing with this subject Pestalozzi is at the very opposite pole to that which marks what is usually understood by the teaching of arithmetic. He did not set out to teach his pupils how to do sums, but how to understand numbers. On his plan the learner was able to do sums, easily and accurately, because he understood numbers; on the other plan children learn to do sums but may never understand numbers. His pupils were able to discover the ordinary rules of arithmetic from their study of the principles of numbers; pupils under the other system learnt the rules by rote

and worked the sums unintelligently. As a matter of fact his pupils were the most acute and rapid of practical arithmeticians, amazing every one by their speed and accuracy. He made no use whatever of figures until his scholars knew the numbers themselves perfectly, up to ten; and he taught no tables of weights and measures, nor what may be called business arithmetic, until the pupil had mastered the theory and art of numbers, and then only such tables and calculations as the scholar was likely to want in his future calling.

Number knowledge must, like all other knowledge, start from, and develop through, sense-impressions. Here is Pestalozzi's own theory of number: "This science arises altogether out of the simple composition and separation of units. Its fundamental formula is this: 'one and one are two'; 'one from two leaves one'. Any number, whatever be its name, is nothing else but an abridgment of this elementary process of counting. Now it is a matter of great importance, that this ultimate bases of all number should not be obscured in the mind by arithmetical symbols. The science of numbers must be taught so that their primitive constitution is deeply impressed on the mind, and so as to give an intuitive knowledge of their real properties and proportions, on which, as the groundwork of all arithmetic, all further proficiency is to be founded. If that be neglected, this first means of acquiring clear notions will be degraded into a plaything of the child's memory and imagination, and its object, of course, entirely defeated.

"It cannot be otherwise. If, for instance, we learn merely by rote 'three and four make seven,' and then we build upon this 'seven,' as if we actually knew that

three and four make seven, we deceive ourselves; we have not a real apprehension of seven, because we are not conscious of the physical fact, the actual sight of which can alone give truth and reality to the hollow sound. . . .

“The first impressions of numerical proportions should be given to the child by exhibiting the variations of more and less, in real objects placed before his view . . . in which the ideas of one, two, three, etc., up to ten, are distinctly and intuitively presented to his eyes. I then call upon him to pick out in those tables the objects which occur in the number one, then those which are double, triple, etc. After this I make him go over the same numbers again on his fingers, or with beans, pebbles, or any other objects which are at hand. . . .

“In this manner children are made perfectly familiar with the elements of number: the intuitive knowledge of them remains present to their minds while learning the use of their symbols, the figures, in which they must not be exercised before that point be fully secured. The most important advantage gained by this proceeding is that arithmetic is made a foundation of clear ideas; but, independently of this, it is almost incredible how great a facility in the art of calculating the child derives from intuitive knowledge. . . .

“A square [tablet] is put up, and the teacher asks: ‘Are there many squares here?’ Answer: ‘No, there is but one’. The teacher adds one, and asks again: ‘One and one; how many are they?’ Answer: ‘One and one are two’; and so on, adding at first by ones, afterwards by twos, threes, etc.

“After the child has in this manner come to a full understanding of the composition of units up to ten,

and has learned to express himself with perfect ease, the squares are again [used] in the same manner, but the question is changed: 'If there are two squares, how many times have we one square?' The child looks, counts, and answers correctly: 'If there are two squares, we have two times one square'.

"The child having thus distinctly and repeatedly counted over the parts of each number up to ten, and come to a clear view of the number of units contained in each, the question is changed again, the squares being still put up as before. 'Two: how many times one is it? Three: how many times one?' etc.; and again: 'How many times is one contained in two, three?' etc. After the child has in this manner been introduced to the simple elements of addition, multiplication and division, and become conversant with their nature by the repeated representation of the relations which they express, in visible objects, subtraction is to be exercised upon the same plan, as follows: the ten squares being put up together, the teacher takes away one of them, and asks: 'If I take one from ten, how many remains?' The child counts, finds nine, and answers: 'If you take one from ten, there remains nine'. The teacher then takes away a second square, and asks: 'One less than nine: how many?' The child counts again, finds eight, and answers: 'One less than nine are eight'; and so on to the end.

"This exemplification of arithmetic is to be continued in successive exercises, and in the manner before described. For example:—

1 1 1 1 1 1 1 etc.
 1 1 1 1 1 1 1 1 1 1 etc.
 1 1 1 1 1 etc.

“As soon as the addition of one series is gone through, the subtraction is to be made at the same rate, thus: having counted together one and two make three, and two make five, and two make seven, and so on up to twenty-one squares, the subtraction is made by taking away two squares at a time, and asking: ‘Two from twenty-one: how many are there left?’ and so on.

“The child has thus learned to ascertain the increase and diminution of number, when represented in real and movable objects; the next step is to place the same successions before him in arithmetical tables, on which the numbers are represented by strokes or dots.”

Such a training in real number will, Pestalozzi asserts, enable the child “to enter with the utmost facility upon the common abridged modes of calculating by figures. His mind is above confusion and trifling guesswork; his arithmetic is a rational process, not mere memory work, or mechanical routine; it is the result of a distinct and intuitive apprehension of number, and the source of perfectly clear ideas in the further pursuit of that science.” As he says in another place, his method “was to develop the internal power of the child rather than to produce those results which, nevertheless, were produced as the necessary consequences of my proceedings. . . . The effect of my method was to lay in the child a foundation of knowledge and further progress, such as it would be impossible to obtain by any other. . . .

“The increase and diminution of things is not confined to the number of units; it includes the division of units into parts. This forms a new species of arithmetic, in which we find every unit capable of division and subdivision into an indefinite number of parts.

“ In the course before described, a stroke representing the unit was made the intuitive basis of instruction ; and it is now necessary, for the new species of calculation just mentioned, to find a figure which shall be divisible to an indefinite extent and yet preserve its character in all its parts, so that every one of them may be considered as an independent unit, analogous to the whole ; and that the child may have its fractional relation to the whole as clearly before his eyes as the relation of three to one, by three distinct strokes.

“ The only figure adapted to this purpose is the square. By means of it the diminution of each single part, and the proportionate increase of the number of parts by the continued division and subdivision of the unit may be made as intuitively evident as the ascending scale of numbers by the addition or multiplication of units. A fraction table has been drawn up [to show this]. . . .

“ Now as the alphabet of forms is chiefly founded upon the division of the square into its parts, and the fractional tables serve to illustrate the same division in a variety of manners, the alphabet of forms, and that of fractions, prove in the end the same ; and the child is thus naturally led to connect in his mind the elements of form with those of number, both explaining and supporting each other. My method of arithmetic is therefore essentially founded upon the alphabet of forms, which was originally intended only for the purposes of measuring and drawing.

“ By means of these fractional squares, the child acquires such an intuitive knowledge of the real proportions of the different fractions, that it is a very easy task, afterwards, to introduce him to the use of figures

for fractional calculation. Experience has proved, that by my method they arrive at this part of arithmetic from three to four years earlier than by the usual mode of proceeding. And it may be said of this, as of the former course, that it sets the child above confusion and trifling guesswork; his knowledge of fractions being founded upon intuitive and clear ideas, which give him both a desire for truth and the power of discovering and realising it in his mind."


Throughout the teaching of number, Pestalozzi's aim is to develop distinct ideas through grouping (addition and multiplication), separating (subtraction and division), and comparing (ideas of more and less) the objects—as to their quantitative (number) elements—of perception. When the ideas of the learner have been perfected through number-teaching, then the learning of the ordinary arithmetical rules is but the application of his trained ideas to the practical affairs of life; and it will be found that he is able to understand the problems and discover the rules, in most cases, for himself.

Pestalozzi had three arithmetical tables which he used in teaching number. We give sections of these to show what they were.

I. TABLE OF
SIMPLE UNITY.

I	I	I
II	II	II
III	III	III

II. TABLE OF SIMPLE
FRACTIONS.

III. TABLE OF COM-
POUND FRACTIONS.

In the Table of Simple Unity there were ten of each number on a line ; so that on the last line there were ten tens. The other numbers were put thus: IIII, IIIII, IIIIII, IIIIIII, IIIIIIII, IIIIIIIII. The Table of Simple Fractions had ten squares in each line, and ten lines ; the last line being ten squares divided into tenths. The Table of Compound Fractions also had ten lines and ten squares in each. In the first line the unit was divided in halves, thirds, etc., to tenths ; in the second line halves were divided into their halves, thirds, etc., to tenths ; and in the last line tenths were similarly divided.

In teaching units Pestalozzi did not confine himself to the Table of Units, *i.e.*, to visual sense-impressions. He says that, when the pupils were familiar with this, he "let them find the same relations on their fingers, or with peas, stones, or other handy objects" (*How Gertrude Teaches*). After the four simple rules had been mastered the learner was taken to fractions ; and not until these were known was he allowed to apply his, now complete, number knowledge to practical arithmetic, *i.e.*, sums concerning money, weights, measures, etc.

Very full and detailed exercises were given for all the numbers up to 100 ; and for all the small fractions. These exercises had to be thoroughly mastered and known, before what we now call concrete sums were worked. Although the pupils were dealing with some kinds of objects—diagrams, pictures and things—all the time, yet the formal and mechanical elements were largely present, and must have taken up much of the time and energy of the teachers and learners.

CHAPTER XII.

PESTALOZZI'S METHODS OF TEACHING VARIOUS OTHER SUBJECTS.

Geography. In the *Swan's Song* Pestalozzi says that the accurate observation of the different conditions of water, at rest or in motion: its changing into dew, rain, vapour, steam, hoar-frost, hail, etc.: and its action on other objects of nature; and the expressing of the results of such observations in clear and fitting language, give the beginnings of physical geography. The pupil must first be taught to observe the country around his own home; not studying it through a map, but by actually walking about the land itself. He must learn to make a map—correcting any mistakes in his first attempts from fuller and more accurate knowledge gained from later visits—before he is allowed to see, much less to make use of, a school map. The maps used in school teaching should be blank maps.

One of the Yverdon pupils, Professor Vulliemin, thus describes the actual teaching in geography: "The first elements of geography were taught us from the land itself. We were taken to a narrow valley not far from Yverdon, where the river Buron runs. After taking a general view of the valley, we were made to examine the details, until we had obtained an exact and complete idea of it. We were then told to take some clay,

which lay in beds on one side of the valley, and fill the baskets which we had brought for the purpose.

“On our return to the castle, we took our places at the long table, and reproduced in relief the valley we had just studied, each one doing the part which had been allotted to him. In the course of the next few days more walks and more explorations, each day on higher ground, and each time with a further extension of our work. Only when our relief was finished were we shown the map, which by this means we did not see till we were in a condition to understand it.”

From the very beginnings geography is to be correlated with the other sciences, such as natural history, agriculture, geology, etc.; not only because these are directly connected with each other, but also because greater and continuous interest is thus aroused.

Dr. Biber, after describing, in glowing terms, the pre-eminent advantages of the surroundings at Yverdon, for teaching geography to the pupils there, says: “He taught them to watch the gathering up of the morning mists, and the shadows of the early clouds, which passing over the glittering lake hid for a moment, as with a veil of gauze, its streams of undulating gold; he directed their eyes to the flaming characters with which the sun writes the farewell of day on the traceless surface of eternal snow; he stood listening with them to the majestic voice of nature, when the autumnal gale howling on the floods, rolled billow after billow to the bleak shore; he guided their steps to the mountain caves from whose deep recesses the stately rivers drew their inexhaustible supplies.

“Wherever he found a leaf in the mysterious book of creation laid open, he gave it to them to read, and

thus, within the narrow sphere of their horizon, taught them more of earth and earthborn beings, than they could have learned by travelling, in the pages of a heavy volume, all round the globe. This was indeed 'intuitive' teaching, and experience proved that, independently of the moral effect which such an intercourse with nature can never fail to produce, the reality and vivacity of the ideas awakened in the children, concerning the relations of the great elements to each other, and to the beings whose existence they support, ensured a permanent and lively attention to whatever ulterior instruction in the science of geography it was deemed expedient to impart. . . .

“The simple features by which the hand of nature has distinguished the different countries, were presented to the mind long before the artificial mould into which man has cast them. Physical and mathematical geography, founded upon the ideas acquired by self-observation, formed the ground-work of this branch of the method, and statistical facts were superadded at the end, arranged in concise tables so as to facilitate their recollection.”

History. Pestalozzi held that it was unwise to attempt to teach historical incidents, and their causes and effects, to young children. Not only are children unable and unfitted to judge of the doings and motives of men and nations, but their moral and intellectual progress is hindered and hampered by attempts to do this, and by so early an acquaintance with the wickedness and violence they have to learn about in the study of history.

Dr. Biber says: “The historical lessons laboured under still greater imperfections. Pestalozzi, from a

sort of prejudice which he had conceived against historical studies, gave but little encouragement to their cultivation in the establishment, and accordingly their treatment by the different teachers was, more than that of any other branch of instruction, subject to endless changes. One man read abstruse lectures; another drew up a set of synchronistical tables; to some it seemed preferable to connect all history with biographical sketches, while others indulged in lengthy discussions on the different forms of government, and the best polity; some hurried over the whole of the records of human-kind in a few months; while others found their whole set of pupils changed between their ante- and post-diluvian lessons."

Science. It would not be too much to say that the whole Pestalozzian system is based upon, and developed through, science and the scientific method. There remains, therefore, only the special work in science, as such, to be considered. Here again Pestalozzi starts with ultimate beginnings, so far as these are known and useful for educational purposes. When, he says, a child has learned to observe accurately and to express correctly—in an elementary manner—what happens when salt and sugar are dissolved in water: the change from liquid to solid states: their crystallisation: the fermentation of wine in the cellar: its turning sour and becoming vinegar: the transformation of alabaster into plaster, marble into lime, sand into glass, etc., he has developed in himself the elementary scientific percepts, and is likely to have a tendency towards further scientific investigation.

Science teaching, he says, is chiefly (if not only) valuable—in the early stages of education—for developing

in the individual their powers of intuition and thought, so that they may be enabled to judge wisely and act independently in the affairs of life. It is through intuitions (involving observations and perceptions) that nature, and life, educate men from their first moment to their last; and, therefore, the educator must educate in a like manner, or he will hinder rather than help a man's development.

Hence Pestalozzi's efforts to find the very simplest beginnings of knowledge (through intuitions), so that the learner might obtain a method and a habit of judging, inquiring and classifying. "The simple question: 'What materials in the three natural kingdoms can man use for his clothing?' gives an example of this. The child will consider and examine, from this point of view, many materials which he thinks may help him towards finding the answer to this technological problem. By such means he himself constructs the knowledge which he is to obtain. Of course the necessary subject matter must be made accessible to him in every possible way."

Of his actual methods we get some direct information from one of his own pupils. De Guimps speaks of "our mountain excursions. . . . As soon as we got to the high mountain pastures under the pines, we lost our feeling of fatigue, and fell to playing games or collecting herbs and minerals. . . . On returning from these excursions the pupils had to describe them, either orally or in writing, according to their ages. There was generally a great deal to say, as our attention was always carefully drawn to everything likely to prove instructive. These excursions were, in fact, practical lessons in natural history and geography."

Pestalozzi, in speaking of Krüsi, says: "In conse-

quence of our gathering plants, during the summer, and of the conversations to which this gave rise, he was brought to the conviction that the whole round of knowledge, to the acquisition of which our senses are instrumental, depended on an attentive observation of nature, and on a careful collection and preservation of whatever she presents to our thirst for knowledge”.

In the institute the masters brought different objects under the pupils' immediate observation, and, by careful questioning, encouraged them to tell what they observed. The objects generally taken were such as the pupils brought home from their walks; but these were supplemented by collections of minerals, plants, stuffed animals, etc.

“Natural history and physical science were taught entirely without plan, though, in some instances, in a manner decidedly superior. The children were led to observe and to examine for themselves such objects and phenomena as were within reach; and, to enlarge the sphere of their knowledge, their teachers made excursions with them in different directions through the country. Sometimes they would all travel together, at other times they were divided into several troops, which, on their return home, communicated to each other the results of their observations. In an establishment in which there were no standing vacations, a few weeks every year could well be devoted to such expeditions, without encroaching on the time of their regular studies; and, in a country so eminent for the abundance and variety of its natural productions, it was impossible that the pupils should not, under the guidance of intelligent teachers, acquire rich stores of real information. The only objection that lay against the method pur-

sued in the institution on these subjects, was that the pupils did not acquire a comprehensive view of the sciences, but that their knowledge, being gathered as it were upon casualties in the first instance, had a tendency afterwards to remain fragmentary" (Dr. Biber).

In his *Report to the Society of the Friends of Education*, written in 1800, while he was at Burgdorf, Pestalozzi says: "If the child knows simple bodies—air, earth, water and fire—I show him the effects of these elements on bodies which he knows, and as he learns to know the properties of several simple bodies, I demonstrate to him the different effects obtained by uniting one body to another; and lead him, always by the simplest course of sense-impressions, to the boundaries of the higher sciences".

No one could be more opposed to the verbal method in science-teaching, *i.e.*, the lecture and text-book methods. He says: "All science-teaching that is dictated, explained and analysed by men who have not learnt truly to think and speak in agreement with the laws of nature: all science-teaching of which the definitions are forced, as if by magic, into the minds of children like a *Deus ex Machinâ*, or, rather, are blown into their ears after the manner of a stage-prompter—so far as it does go in—must necessarily degrade into a miserable caricature of education.

"For where the fundamental powers of the human mind are left unawakened; and when words are crowded upon the sleeping powers, we make dreamers, who dream unreasonably and irregularly, in proportion as the words, crammed into these unhappy open-mouthed creatures, are big and pretentious. Such scholars dream of anything in the world except that

they are asleep and dreaming. . . . I do not deny that even such methods may turn out satisfactory tailors, shoemakers, tradesmen and soldiers; but I do deny that they can produce a tailor or a tradesman who is a *man* in the highest sense of the word."

Writing of his visit to Yverdon, in 1805, Froebel says: "In natural history I heard only the botany. The principal teacher, who also prepared the plan of instruction for this subject throughout the school, was Hopf, who was an active young man like the rest. The curriculum arranged and carried out by him had in it much that was excellent. In each individual case, *e.g.*, the shape and position of leaves, flowers, etc., he would first obtain all the possible varieties of form, by question and answer between the class and himself, and then he would pick out from the results the form which was before them in nature. These lessons were in this way made attractive."

Music. We have already seen the high value which Pestalozzi attached to music as a moral influence. Writing of it as a means of æsthetic development, he says: "Nature has two principal and general means of leading human activity towards the cultivation of the arts, and these should be used, if not before, at least at the same time as any particular means. They are singing and the sense of the beautiful. The mother lulls her child with song; but here, as in all else, we refuse to follow the law of nature. . . . Why has not the progress of the arts during so many centuries managed to find us what is necessary to carry on these lullabies in after life? Why has it not given us a set of national songs capable of elevating the very humblest souls, and passing from the simple cradle

melody to the sublime hymn of praise to God? I am incapable of supplying the want, alas! I can only call attention to it." There is something specially striking in such views in one who "could not even sing, though, when unusually excited or elated, would hum to himself snatches of poetry; not, however, with very much tune".

At Burgdorf M. Buss was the teacher of music. Ramsauer tells us that: "The thirty or forty children of both sexes in Pestalozzi's old school came from the town to the castle to take part in the singing. Buss made his pupils sing as they walked, two by two, holding each other's hand, up and down the big corridors of the castle. This was our greatest pleasure. . . . Indeed singing was one of our chief sources of enjoyment in the institute. We sang everywhere—out of doors, during our walks, and, in the evening, in the court of the castle; and this collective singing contributed, in no small degree, to the harmony and good feeling which prevailed among us."

De Guimps, in describing the "mountain excursions" from Yverdon, says: "We would sing gaily as we passed through the villages, where the peasants often gave us fruit. As soon as we got to the high mountain pastures under the pines . . . we often assembled at some good point of view to sing the wild, simple Alpine melodies our masters loved to teach us. To-day, after more than sixty years, I can recall those songs as vividly as in those early days when I first sang them, and they still seem very beautiful to me." In another place he tells us that the Christmas Eve festivities were "interspersed with joyous songs, in which the children always took the greatest pleasure. Indeed, singing played a great

part in Pestalozzi's institute, and was the joy of almost every one in the house. There was singing everywhere and always."

Dr. Biber speaks of "the cheerful songs with which the youthful choir of Pestalozzi's pupils saluted the rising sun, or the lovely breezes of returning spring . . . the hymns of praise and thanksgiving, especially reserved for solemn occasions".

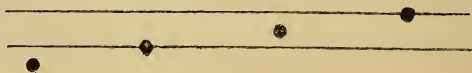
Two Swiss, Nägeli and Pfeiffer, rendered great assistance in this work by publishing some excellent collections of sweet and simple songs for children; and training the pupils in the institute on a definite and systematic plan. This was quite a new feature in education, at that time. The teaching was based upon a new musical notation which had been invented by Rousseau, in 1741. In this the movable Do is adopted, and the notes of the scale are indicated by the numbers 1. 2. 3. 4. 5. 6. 7. $\bar{1}$. For the absolute pitch, as it is called, of the notes as shown on the staff the old syllable letter names were retained, *viz.*, ut, re, mi, fa, sol, la, si; and C. D. E. F. G. A. B. In effect, it anticipated all the essential principles of the Tonic Sol-Fa method—indeed the Rev. John Curwen testified that he was deeply indebted to it for his system—and has been greatly extended and improved by M. Chev . It is now much used in France, and is known as the Chev  method. It is also known and used in England.

The order of teaching was: (1) The first exercises were entirely given to the time value of the notes; the crotchet being the unit, of which the minim was the double, and so on for the longer notes: the quaver was the half, and so on for the shorter notes. The rests were taught in connection with the note whose place they

took. (2) Next the arrangement of notes in a bar: the different "times" (common, triple, etc.): subdivisions of the lengths of notes by dotting, binding and grouping. In this the pupil was led, by questioning, to the discovery of as much as possible. Both the first and second steps concern rhythm, and, therefore, all the exercises were on the same note, so that the pupil's attention might be entirely confined to the time element.

Next is taken (3) "melody," *i.e.*, the ascending and descending succession of notes. All the early exercises are with notes of equal length; in order that the attention may be given wholly to the tune element. At this point the teacher is, by testing, to find out the vocal capabilities of the child. Then comes (4) a study of intervals, through the tetrachord, *i.e.*, the succession of four notes separated by a tone between the first and second and the second and third, and a semitone between the third and fourth; which make up half an octave. These exercises are notated thus: I. 2. I .. 2. 3. 2 .. 3. 4. 3 .. 4. | 4. 3. 4 .. 3. 2. 3 .. 2. I. 2 .. I.—in which the double dots (..) stand for a pause, and the perpendicular stroke for a longer pause. After various exercises on this interval—a second—there follow exercises on the third, *e.g.*, I. 2. 3. I. 3 .. 2. 3. 4. 2. 4. | 4. 3. 2. 4. 2 .. 3. 2. I. 3. I. etc.; and so on with the other intervals. When these have been mastered, the teacher is to sing the same or similar intervals, and ask the pupils to tell what he has sung. These exercises will train both voice and ear.

The above exercises are carried on by means of this diagram on the blackboard:—



The teacher is to indicate with a pointer the various successions to be sung: the four notes being called 1. 2. 3. 4.

The next step (5) consists in working with two tetrachords. In the first exercise the last note of the first tetrachord becomes the first note of the second. Next the second tetrachord is started one note higher than the last note of the first tetrachord, *e.g.*—

(a) 1. 2. 3. 4.	(b) 1. 2. 3. 4.
: : : 1. 2. 3. 4.	: : : : 1. 2. 3. 4.

Now since the last interval in the tetrachord must be a semitone, it will be seen that these exercises give us, in connected form: 1. 2. 3. 4. 5. 6. 7^b and 1. 2. 3. 4. 5. 6. 7. $\bar{1}$.

Thus the learner is introduced to sharps and flats, and the scales. This will easily be seen if we use the ordinary letter names (absolute pitch), and extend the exercises.

(a) C. D. E. F. F. G. A. B ^b . B ^b C. D. E ^b . E ^b F. G. A ^b .	(b) C. D. E. F. G. A. B. C. D. E. F [#] G. A. B. C [#] D.
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In connection with these exercises the staff is introduced. At first all the exercises are written with the C clef, because all the notes can be kept within the staff, and the beginner is thus less likely to get confused. Leger lines are introduced later on; and the chromatic scale is evolved through the above exercises. The pupils are thoroughly questioned on the differences between the diatonic and the chromatic scales, until the teacher is quite convinced that they have mastered them.

After this the pupil is to be taken through voice culture, harmony and composition. But as all this is beyond the elements, so far as young children are concerned, we need not even give an outline of it. Sufficient, it is hoped, has been said to give an idea of the general method.

Manual Work and Physical Training. Of this Pestalozzi says: "In endeavouring to impart to the child those practical abilities which every man stands in need of, we ought to follow essentially the same progress as in the communication of knowledge; beginning from an alphabet of abilities, if I may so express myself: that is to say, from the simplest practical exercises, which, being combined with each other, would serve to develop in the child a general fund of ability, to be applied to whatever purpose circumstances might render it necessary in after life.

"Such an alphabet, however, has not yet been found, and that from the obvious reason that it has not been sought for. I am not inclined to think that it would be very difficult to discover it, especially if the research were made with the same zeal with which even the trivial abilities connected with the operation of money-getting are attended to. If once discovered it would be of essential benefit to mankind. It ought to comprise the simplest performances of the bodily organs of action, such as *striking, carrying, throwing, pushing, pulling, turning, twisting, swinging*, etc. Whatever manipulations may occur in any calling may be reduced to some one or more of the simple actions and their combinations. The alphabet of abilities should therefore consist of a complete succession of them all, arranged in the order in which they follow each other

practically, according to the structure of the human body, and the greater or less pliability of its different parts.

“Our popular education, of course, knows nothing whatever of a succession of exercises which would lead from those simplest performances to the highest degree of bodily self-command, in which we might combine them in a variety of ways; and use our arms and legs, now in parallel, and then in opposite directions. . . . We have schools for spelling, for writing, for learning the catechism, but we have no schools for the education of human beings. . . .

“In cultivating our practical abilities we are obliged to act; whereas knowledge may be obtained in an almost passive state: we need only open our eyes and our ears. In this there is no exertion of the will, at least not so far as to qualify the impression to be received; the character of which depends, on the contrary, on the object of nature that is presented to our senses at the time. But in the exercise of our abilities we are the prime movers, the originators of the fact itself; we determine and qualify the act which we intend to perform; and though we are obliged to confine ourselves within the limits which the law of our physical nature has prescribed to us in our powers and organs of action, yet we are not, as is the case in perception, mainly dependent on outward objects.

“The same principles by which the development of our practical abilities is regulated, ought also to preside over their application. Whatever is calculated to lead to a partial and merely fragmentary cultivation or use of those abilities, which are essentially required to satisfy the wants of human nature generally, and the

claims of each peculiar calling and station, is contrary to the true art of education; because out of harmony with that law of nature which enjoins upon us the maintenance of harmony and equilibrium in our own state, as well as in the different relationships of life in which we are providentially placed. . . .

“The alphabet of abilities is intended to lay the groundwork of future virtues, in the progress of our moral education. Self-command over our physical powers and movements is, as it were, the apprenticeship of virtue, in the bondage of which we are to be kept, until the development of higher powers assigns to our physical nature at once a subordinate position, and a more elevated aim. Upon the attainment of practical abilities positive rules are to be built; in the same manner as clear ideas upon distinct and comprehensive intuitions; and the former, as well as the latter, are to be summed up in definitions. . . . A neglect of the practical abilities of life produces exactly the same effect as the mistake of inculcating the doctrines of virtue and of faith, before a practical feeling of either has been produced in the mind.”

De Guimps gives an account of the manual work and physical training as carried on at Yverdon. “When the weather permitted, some hours in the afternoon were, every week, given to military exercises. The pupils were formed into a regiment, with flag, drum, band and arsenal; and soon became skilful in the most complicated manœuvres. When they engaged in shooting, the non-commissioned officers were told off to make the cartridges, under the directions of the chief instructor. From time to time they had sham fights in some suitable place a few miles from the town. On

these occasions they started very early in the morning, accompanied by a waggon in which were the provisions and ammunition. Many parents and lookers-on often joined the party; so that it was an exciting time for the pupils. Sometimes, too, they practised target-shooting: the prize for which was an ewe with its lamb, and the use of a little shed in the garden.

“Gymnastics, prisoner’s base, and other games were played regularly. . . . Manual labour had a place in Pestalozzi’s programme: it was often tried at the institute, but never kept up in a regular manner. The large number of, and the diversity amongst, the pupils and the occupations seemed to prove an insurmountable difficulty. Gardening succeeded best of all. Sometimes the pupils had their own little plots to cultivate; and sometimes they were sent by turns, in twos and threes, to work for a few hours under the directions of a gardener. Some did fairly well at book-binding and cardboard-work, in which they made the solids for the study of geometry.”

In the letter describing his experiences at Stanz Pestalozzi says: “I tried to connect study with manual labour, the school with the workshop, and make one thing of them. . . . I am more than ever convinced that as soon as we have educational establishments connected with workshops, and carried on upon a truly psychological basis, a generation will inevitably be produced which will prove to us by experience that our present studies do not need a tenth part of the time or trouble we now give to them.”

Pestalozzi’s purpose in manual work was, in the first instance—as at Neuhof and Stanz—somewhat narrow and likely to prejudice a child’s future; for it was de-

signed to teach him an occupation by which he would earn his living. To do this before the pupil had shown what special abilities, inclinations and opportunities he might have, was likely to dwarf his development and sacrifice his social usefulness. He seems to have realised this, and based his theory on the point of view contained in this question: "What are the means of developing in the child those practical abilities which the ultimate purpose of his existence, as well as the changeable positions and relations of life will, or may, require of him; and cultivating them to such a degree of perfection, that the fulfilment of his duties will be to him, not only possible or easy, but in reality a second nature."

Latin. A very interesting account of the application of his principles, by Pestalozzi himself, to the teaching of Latin, is given by De Guimps. "He considered the best means of teaching a foreign language to be that which nature employs in teaching a child to speak its mother-tongue, *viz.*, constant practice in the spoken language. It was thus that, with the addition of a little grammar, the Germans learned French, and the French learned German, most successfully, at Yverdon. Pestalozzi, thereupon, asked himself if it would not be possible to use the like means for teaching a dead language, and he resolved to try the experiment."

So, when sufficiently recovered from a painful illness to lie on the sofa, he caused "some six or seven children who had not yet begun Latin, amongst them the writer of these lines, [to be] brought to his couch every day. [He] had with much care selected from *Cæsar's Commentaries* a number of short passages and detached phrases, all bearing on the same subject, and nearly all

containing the same words; with these selections he had, in his illegible hand, covered several sheets. As we stood by the couch, where he lay weak and suffering, he would give us a phrase which we all had to repeat until we knew it by heart. He would then explain the different words, and point out some of the changes which they undergo when it is required to modify the sense of the sentence.

“In this way the study of syntax and accidence went on hand in hand. We were soon able to make certain changes for ourselves, and to construct sentences of such elements as were known to us; that is to say, with a very limited vocabulary, and a very narrow range of topics, we spoke Latin like Cæsar. These lessons were continued during the whole period of the old man’s convalescence.”

Pestalozzi, in his *Swan’s Song*, asserts that “A child soon learns to speak a foreign language even from an illiterate person, who merely talks to him without any attempt at instruction; but he does not do this with a skilful teacher who adopts the mechanical grammatical method”.

Dr. Mayo gives this account of Pestalozzi’s plan: “He does not begin with definitions, because a child never comprehends them; but, first calling up the idea in the child’s mind by conversing with him, he gives him the simple sentence: *Leo est animal*. Here the words *leo* and *animal* being, one almost the same the other just the same as, those which express the same idea in English, they readily enter the child’s mind. From this he proceeds to: An *apis* is what? An *animal*, says the child, using the word he had learnt just before. Proceeding in this manner he stocks the

child's mind with words, before he enters on the inflections of those words—always endeavouring to link what the child has next to learn with what he has already acquired.

“In the declensions he does not propose to the child: *Musa*, a muse; *musæ*, of a muse; words which cannot interest the child, because they represent only parts of ideas. He involves the important word in sentences, e.g., *Rosa est flos*; *Rosæ odor est suavis*, etc., through all the cases. The child having learnt the inflection of *Rosa* has a similar word proposed to him, also enveloped in little sentences, but he is now required to find the terminations. In teaching syntax he gives examples which lead the child to find the rule; and then makes it apply the rule, in the same way as in the declensions.

“The advantages of this method are briefly these: you do not disgust the child in his first intellectual exertions; you exercise other faculties besides memory; you enrich his mind with a great number of ideas; and you furnish him with a *copia verborum* before you set him down to translate a classical author, or to express his own ideas in a connected chain in the language.”

Pestalozzi points out that whilst some are ready to admit—because they cannot help doing so—that modern languages may be learned in this way, yet they most strongly maintain that the orthodox method of teaching the dead languages has proved, by its successful results, to be sound, and that it is really based on a firm and psychological foundation as to its advanced stages. While he admits the latter claim—as to the advanced stages—he affirms that the old method of teaching the rudiments of the classics is, both from

the psychological standpoint and in regard to the memory element, unnatural and inefficient.

He holds that the study of language, properly carried out, forms the connecting link between the faculty of sense-perception and the faculty of thought. The three faculties, perception, language and thought, are the whole means of intellectual education. For these reasons the study of foreign languages should be in complete agreement with that of the mother-tongue. Good practical proof of the truth of this, says Pestalozzi, is found in the fact that uneducated foreign nursemaids are able successfully to teach their own language to little children by following this natural method; and that foreigners soon pick up the language of a country by the like method.

Pestalozzi seems to have taken up the question of the teaching of the dead languages with all his ardent and intense enthusiasm. Dr. Mayo says: "Pestalozzi is mad about the application of his system to the classics . . . as he had a clever little German to aid him he may throw some light on this most difficult branch".

Teaching of Morals. Positive morality was, like other things, to be taught through facts and acts not words. "Glülphi was deeply impressed with the truth that education is not imparted by words but by facts. For kindling the flame of love and devotion in their souls, he trusted not to the hearing and learning by heart of passages setting forth the beauties of love and its blessings; but he endeavoured to manifest to them a spirit of genuine charity, and to encourage them to the practice of it both by example and precept. He led them to live in love. . . . If there was any one ill in the

house of any of the children, were it father or mother, or brother or sister, or even the meanest servant, he never failed to ask the child, the moment he entered the school-room, how the invalid did, and the child had to give him a detailed and accurate account. . . .

“The children were asked likewise, whether they had spoken themselves to the invalid, and whether they had contributed to alleviate his sufferings, if it were only by avoiding every noise and bustle in the house. Of the older children, Glülphi inquired whether they sat up with their sick, and how long they could bear it; and he testified to them his approbation when he found they did so willingly. . . . It was in this spirit he taught faith and love practically; and the children showed that they understood his instruction, more frequently by tears of emotion, or by a significant silence, than by clever answers to catechetical questions on the respective doctrines” (*Leonard and Gertrude*).

Of the moral education of the children at Stanz he writes: “My one aim was to make their new life in common, and their new powers, awaken a feeling of brotherhood amongst the children, and make them affectionate, just and considerate. I reached this end without much difficulty. Amongst these seventy wild beggar-children there soon existed such peace, friendship and cordial relations as are rare even between actual brothers and sisters.” This he did by the example of his own behaviour to them, and by giving them opportunities for behaving similarly to others. This touching incident is related by him:—

“When the neighbouring town of Altdorf was burnt down, I gathered the children round me, and said, ‘Altdorf has been burnt down; perhaps, at this very

moment, there are a hundred children there without home, food or clothes; will you not ask our good Government to let twenty of them come and live with us?' I still seem to see the emotion with which they answered, 'Oh, yes, yes!' 'But, my children,' I said, 'think well of what you are asking! Even now we have scarcely money enough; and it is not at all certain that if these poor children came to us, the Government would give us any more than they do at present, so that you might have to work harder, and share your clothes with these children, and sometimes, perhaps, go without food. Do not say, then, that you would like them to come unless you are quite prepared for all these consequences.' After having spoken to them in this way as seriously as I could, I made them repeat all I had said, to be quite sure that they had thoroughly understood what the consequences of their request would be. But they were not the least shaken in their decision, and all repeated, 'Yes, yes, we are quite ready to work harder, eat less, and share our clothes, for we want them to come'."

Pestalozzi then reveals—quite unconsciously, apparently—one of his deep insights into the possibilities of human education. He writes: "I followed up this awakening of the sentiments by exercises intended to teach the children self-control, and interest the best natures amongst them in the practical questions of everyday life. It will easily be understood, in this respect, it was not possible to organise any system of discipline for the establishment; that could only come slowly, as the general work developed. . . . One young girl, for instance, who had been little better than a savage, by keeping her head and body upright, and not

looking about, made more progress in her moral education than any one would have believed possible. These experiences have shown me that the mere habit of carrying oneself well does much more for the education of the moral sentiments than any amount of telling and lecturing in which this simple fact is ignored." This interaction of mind on body, and body on mind, as a means of development is one of the greatest truths of scientific education.

True to his theory that all knowledge comes through language, form and number, Pestalozzi uses language as a means of moral education. He holds that perception in the intellectual world is associated with language, in the same way as sense-perception in the physical world depends on external objects (nature). Therefore, in the teaching of grammar through sentence-making, etc., the examples should be in harmony with the circumstances of the learner, and should convey inspiring moral sentiments to the child's mind.

This idea he worked out, with some detail, in *The Natural Schoolmaster: a Father's Lessons on the Customary use of Words, a legacy from Father Pestalozzi to his pupils*, written some time between 1802 and 1805, and first published in 1829. In this book he uses words as the texts for short moral exhortations. Thus: "achten, achtend, geachtet, erachten, beobachten, hoehachten, verachten, sich selbstachten; die Achtung, die Selbstachtung. Children! the first word I am going to explain to you is Selbstachtung (self-attention, self-respect). This it is which makes you blush when you have done wrong: which causes you to love virtue, pray to God, believe in everlasting life, and overcome sin. This it is that makes you honour old age and

wisdom, and prevents you turning aside from poverty and distress: enables you to resist error and falsehood: and teaches you to love the truth. Children! this it is that makes the coward a hero: the idler a worker; and causes us to respect the stranger, and go to the rescue of the outcast and fallen."

In a letter to Gessner, quoted by Krüsi in his preface to the work, Pestalozzi writes: "I hope to complete my reading lessons by a legacy to my pupils, in which, after my death, they will find, connected with the principal verbs in the language, and expressed in such a manner as to strike them as they struck me, a certain number of moral instructions, all drawn from my own experience". Here are some examples:—

"Breathing.

"On thy breath hangs thy life, O man! When thou breathest wrath and vengeance, and convertest the pure air of heaven into poison within thy lungs, what else doest thou but hasten the day when thou shalt be breathless, and the oppressed and afflicted shall be delivered from the fury of thine anger?"

"Thinking.

"Thinking leads man to knowledge. He may see and hear, and read and learn whatever he please, and as much as he please: he will never know any of it, except that which he has thought over, that which by thinking he has made the property of his mind. Is it then saying too much, if I say, that man by thinking, only becomes truly man. Take away thought from man's life, and what remains?"

“Hoping.

“Hoping and waiting make many a fool. And are we, then, not to hope at all? How unhappy would man be without that beam of hope, which in suffering and sorrow sheds light through the darkness of his soul. But his hope must be intelligent. He must not hope where there is no hope. He must look at the past with a steady eye, in order to know what he may hope of the future.”

“Threatening.

“It is a misfortune if one man threaten another. Either he is corrupt who does it, or he who requires it.

“Failing.

“All men fail, and manifold are their failings. Nothing is perfect under the sun. But, unless a man despise himself, he will not think lightly of any of his failings.

“Almsgiving.

“The best alms is that which enables the receiver to cease from begging.

“Changing.

“Change, my child, change all that thou doest and performest, until thou have perfected it, and thou be fully satisfied with it. Change not thyself, however, like a weathercock with every wind; but change thyself so that thou mayest become better and nobler, and that all that thou doest may be ever more perfect and excellent. No such change will ever cause thee to repent.”

While such a means of teaching morals has much

that is suggestive, and some points that are sound, it is—to say the least—somewhat forced and fanciful. Here, as elsewhere, Pestalozzi has let his method run away with him.

One point urged by Pestalozzi is very striking and important, *viz.*, that a mother must expect, sympathise with, and help towards her child's independence of herself. He says: "In the progress of time the child not only is daily exercising and strengthening its physical faculties, but it begins also to feel intellectually and morally independent. From observation and memory there is only one step to reflection. Though imperfect, yet this operation is frequently found among the early exercises of the infant mind. The powerful stimulus of inquisitiveness prompts to exertions, which, if successful, or encouraged by others, will lead to a habit of thought. . . . The child, then, begins to judge for himself, not of things only, but also of men: he acquires an idea of character: he grows, more and more, *morally independent*" (*On Infants' Education*).

CHAPTER XIII.

PESTALOZZI'S GENERAL METHODS AND VIEWS.

The School Atmosphere. The school is not to be a mere learning-shop, where it is the child's work to get through certain tasks, and the teacher's business to see that he does it. The school is to be the home, with a difference. There must be the loving relation of parent to child; and there must be, as far as possible, the same opportunities of using the ordinary actions and objects of daily life as means of development and instruction.

At the Burgdorf institution a visitor exclaimed: "Why, this is not a school: it is a family!" Pestalozzi said: "That is the highest praise you can give me. I have succeeded, thank God, in showing the world that there must be no gulf between the home and the school; and that the latter is only helpful to education in so far as it develops the feelings and virtues which give the charm and worth to family life."

When Glülphi asks Gertrude, in *Leonard and Gertrude*, whether she thought it would be possible to introduce into a regular school the same methods that she followed at home with her own children, she replies: "I am not sure, although I am inclined to think that what is possible with ten children would be possible with forty. But it would be difficult to find a school-



Johann Heinrich Meyer, 1812.

PESTALOZZI.

An allegorical picture; Pestalozzi is in his room at the Castle, yet the Castle is in the scene through the window.

From a transparency in the possession of Miss Mayo.

master who would allow such arrangements in his school."

Gertrude's home education method is thus described: All the children, immediately after breakfast, helped to wash the dishes, and then seated themselves at their spinning. First they sang their morning hymn, and then Gertrude read aloud a chapter from the Bible, the children repeating it after her, while going on with their spinning. Any particularly instructive passage was repeated until it was known by heart. The eldest daughter was, meantime, engaged in making the children's beds in the next room, but she also said (to herself) what the others were saying. When she had finished the bed she went to the garden and fetched the vegetables for the day's dinner. While cleaning these she continued to repeat verses from the Bible.

Whenever Gertrude saw that the children were in any difficulty with their wheels or cotton, she would go to them and put matters right. The younger children, being unable to spin, were set to pick over the cotton for carding, and this they did with great skill. Gertrude's chief desire was to train the children in their work: to make them skilful and good at it.

She was in no hurry to teach them to read and write. It was necessary, she said, to teach them to speak before teaching reading or writing, for these "are only an artificial sort of speech". To get them to speak well she made them pronounce syllables after her in regular succession. These syllables she got from an old A B C book. But her chief concern in this sort of education was to make the children observe things. She did not say to a child: "This is your head: this your nose: this your hand; this your finger". Nor did she ask:

“Which is your eye: your ear?” But she would say: “Come here, my child, I will wash your little hands: I will comb your hair: I will cut your finger-nails”. In this way the children learned to name these parts of their body in the course of their ordinary dealings with them: there was no mere verbal instruction.

The result was that the children were skilful and intelligent; and able to do all such things that children of their age should. To educate them in number-work she taught them to count the number of steps they took to go from one end of the room to the other; and she made use of two rows of window panes (each row having five panes in it) to explain the decimal relations of numbers. They also counted their threads, and the number of turns on a reel. She taught them to observe, intelligently and accurately, many common objects and the forces of nature.

That Pestalozzi fully believed in the possibility of transferring the spirit of home-education to the school is clearly shown by his statement concerning his work at Stanz: “I wanted to prove by my experiment that if public education is to have any real value, it must imitate the methods which make the merit of domestic education”. In fact he accepted the work with a view to prove that his ideas were practicable. In the letter about his work at Stanz he writes: “As I have explained my plan for the public education of the poor in the third and fourth parts of *Leonard and Gertrude*, I need not repeat it here. I submitted it to the Director Stapfer, with all the enthusiasm of a man who felt that his hopes were about to be realised; and he encouraged me with an earnestness which showed how thoroughly

he understood the needs of popular education. It was the same with Minister Rengger."

His criticism on the atmosphere of the common school of his day is very searching and severe: "Our unpsychological schools are in essence merely artificial sterilising machines, for destroying all the results of the power and experience that nature herself calls to life in children. . . .

"We leave children, up to their fifth year, in the full enjoyment of nature; we allow every impression of nature to influence them: they feel the power of these: they learn to know full well the joy of unhampered freedom and all its delights. The free natural bent which the happy, untamed, sensuous being derives from his development, has already taken in them its most definite direction.

"And, after they have enjoyed this happiness of sensuous life for five full years, we cut them off from all their natural surroundings: tyrannically bring to an end the delightful course of their unhampered freedom: pen them up like sheep, whole herds huddled together in stifling rooms: pitilessly chain them for hours, days, weeks, months, years, to the study of unattractive and wearisome letters: and, compared with their former condition, tie them to a maddening course of life" (*How Gertrude Teaches*).

While the intellectual atmosphere is to be quickening and natural; the moral atmosphere must, first and last, be grounded in and permeated by love. Love was the key that unlocked the hearts of Glülphi's pupils, and opened to him the high road to success. "His compassion and his love brought the eminent qualities which he possessed for the office of a schoolmaster

into full play, and made him a very different man from what he had been at first. He now saw that it was on these tender feelings that all the influence of Gertrude in her domestic circle rested, and when he recalled to his mind the image of maternal kindness and faithfulness which he had from the beginning chosen for his model, he remembered at once the beautiful words of the Psalmist: 'Like as a father pitieth his children, so the Lord pitieth them that fear Him'. And he said to himself: 'as the Lord pitieth them that fear Him, so ought I to pity the children of this village, if I truly love them, and mean to be their schoolmaster'.

"Gertrude and Glülphi did, from morning to night, all in their power to retain the confidence and affection of the children. They were constantly assisting them with kindness and forbearance. They knew that confidence can only be obtained by a union of power and love, and by deeds which claim gratitude in every human breast; and, accordingly, they endeavoured daily still farther to attach the hearts of the children to themselves, by conferring upon them numberless obligations, in a spirit of active charity" (*Leonard and Gertrude*).

Writing of his work at Stanz, Pestalozzi remarks: "Before all things I was bound to gain the confidence and the love of the children. I was sure that if I succeeded in this all the rest would come of itself. . . . These children gradually became attached to me; some indeed so deeply that they contradicted their parents and friends when they heard them say evil things about me. They felt that I was not being treated fairly, and loved me, I believe, the more because of this."

Near the end of his life he writes: "Maternal love is the most powerful agent, and affection is the primi-

tive motive in education" (*On Infants' Education*). "The natural means for early education are to be sought in the enlightened love, faith and tenderness of parents—made wise by a knowledge of all the conquests humanity has accomplished" (*Swan's Song*).

Qualifications of a Teacher. The schoolmaster himself must "at least be an openhearted, cheerful, affectionate and kind man, who would be as a father to the children; a man made on purpose to open children's hearts and their mouths, and to draw forth their understandings as it were from the hindermost corner. In most schools, however, it is just the contrary; the schoolmaster seems as if he were made on purpose to shut up children's mouths and hearts, and to bury their good understandings ever so deep underground. That is the reason why healthy and cheerful children, whose hearts are full of joy and gladness, hardly ever like school" (*Christopher and Eliza*).

Pestalozzi, in *How Gertrude Teaches*, says: "I finish describing; otherwise I shall come to the picture of the greater number of schoolmasters, of whom there are thousands to-day who have—solely on account of their unfitness to earn a respectable livelihood in any other way—subjected themselves to the laboriousness of this occupation; and they, in accordance with their unsuitability for anything better, look upon their work as leading to nothing further, but sufficient to keep them from starvation". In another place he says of Krüsi that, when he first began to teach, "he knew no art of school-keeping other than that of setting tasks in spelling, reading, and learning by heart: repeating lessons by turns: warning and chastising with the rod, when the tasks were not known".

It is the first duty of the teacher, as such, to be interested and interesting. "Interest in study is the first thing which a teacher . . . should endeavour to excite and keep alive. There are scarcely any circumstances in which a want of application in the children does not proceed from a want of interest; and there are perhaps none, under which a want of interest does not originate in the method of treatment adopted by the teacher. I would go so far as to lay it down as a rule, that whenever children are inattentive, and apparently take no interest in a lesson, the teacher should always first look to himself for the reason. . . .

"There is a most remarkable reciprocal action between the interest which the teacher takes, and that which he communicates to his pupils. If he has not his whole mind absorbed in the subject; if he does not care whether it is understood or not, whether his manner is liked or not, he will never fail to alienate the affections of his pupils, and render them indifferent to what he says. But real interest taken in the task of instruction—kind words, and kinder feelings—the very expression of the features, and the glance of the eye—are never lost upon children" (*On Infants' Education*).

Of general knowledge, and training for teaching, Pestalozzi appears to think that the teacher—in the broadest sense of the term—has little, if any, need, so long as he is guided by those who have the proper qualifications. The reasons for this view are given in various parts of his writings: of which some typical passages are here given.

"Some of my children developed so well that I found that they were able to do some of the work that I did.

As soon as we have educational institutions combined with workshops, and conducted on truly psychological principles, we shall, I am thoroughly convinced, inevitably form a generation which will prove to us that our present studies require only about a tenth of the time and trouble we now give to them; and that the time and trouble which will be demanded can be made to fit in so entirely with the facts of domestic life, that every parent will be able to give them, with the aid of one of the family or a friend. Such a state of things will daily become more easy, in proportion as the method of instruction is made more simple, and the number of educated people increased" (Letter about Stanz).

Pestalozzi says that he convinced Krüsi of "the possibility of establishing such a method of instruction as he felt was most needed, *viz.*, one which would cause all the branches of knowledge to bear upon one another with such coherence and consistency as would require, on the part of the master, nothing but a knowledge of the mode of applying it, and, with that knowledge, would enable him to obtain not only for his children, but even for himself, all that is considered to be the object of instruction. That is to say, he saw that with this method positive learning might be dispensed with, and that nothing was wanted but sound common sense, and practical ability in teaching, in order not only to lead the minds of children to the acquirement of solid information, but likewise to bring parents and teachers to a satisfactory degree of independence and unfettered mental activity concerning those branches of knowledge in which they would submit themselves to the course prescribed by the method" (*How Gertrude Teaches*).

M. Tobler says of Pestalozzi's efforts at simplification of method: "In trying the details of his method he never leaves any single exercise until he has so far investigated and simplified it, that it seems impossible to advance any farther. . . . I became more and more convinced that it was possible to accomplish what I have before stated to have been the leading object of my own pursuits at a previous period, *viz.*, to re-educate mothers for the fulfilment of that sacred task assigned to them by nature, the result of which would be that even the first instruction imparted in schools, would have previous maternal tuition for a foundation to rest upon. I saw a practical method discovered, which, admitting of universal application, would enable parents, who have the welfare of their children at heart, to become themselves the teachers of their little ones" (*How Gertrude Teaches*).

It is interesting to notice that in a pamphlet, published in 1778, describing his "Educational Establishment for poor children at Neuhof," Pestalozzi says: "In the management of the establishment . . . I have . . . a man who winds for the weavers and teaches reading at at the same time".

Pestalozzi wrote, with the aid of his assistants, *The Book for Mothers* and his *Elementary Books*, so that parents and others might be enabled to carry on the earliest education of infants. Shortly before the issue of these books (at Burgdorf), it will be remembered, the School Commission had reported that his plan of instruction was so simple and suitable that it "could be applied during the earliest years at which instruction could be given in the family circle: by a mother, by a child who was a little older than the beginner, or by an intelligent

servant whilst doing her household work". But Pestalozzi himself had doubts as to the practical success of such books. In the preface to *The Book for Mothers* he writes: "I know quite well what will happen: this poor rind, which is simply the outer form of my method, will seem to be its real substance to many men, who will try to fit in this form with their own narrow circle of ideas, and will then judge of the value of my method according to the results which follow from this strange mixture".

M. Buss says of Pestalozzi's method: "The effect of Pestalozzi's method is to render every individual intellectually independent, by awakening and strengthening in him the power of advancing by himself in every branch of knowledge. It seemed like a great wheel, which, if once set going, would continue to turn round of itself. Nor did it appear so to me only. Hundreds came, and saw, and said: 'Why, that's what I can do myself at home with my child'. And they were right. The whole of the method is mere play for any one who has followed its progress sufficiently to be secured against the danger of straying into those round-about paths which lead man away from the foundation of nature. . . . Nature herself demands nothing of us, but what is easy, provided we seek it in the right way, and under her guidance."

M. Fischer, in summarising Pestalozzi's theory of education, gave as one of the ways in which it sought to simplify the mechanism of instruction: "The book is to replace the teacher". Pestalozzi in commenting on this statement says that he considers this essential; for, he believes, there can be no real advance until forms of instruction have been found, such that the

teacher will be, at least for all elementary knowledge, the mere mechanical tool of a method: the results of which will inevitably arise from the method itself and not from the ability of the man who uses it. A text-book is only good in so far as an uninstructed school-master can use it, at any rate as far as absolute needs are concerned, almost as well as an educated and able teacher. The ignorant man and the mother must find in it sufficient guidance and help to enable him and her always to be a little in advance of the child, in relation to that to which they are to lead it.

Other extracts from *How Gertrude Teaches* will show how firmly Pestalozzi held to the view that any one can teach, if he will only follow a plan laid down for him by one who has got to the roots of the matter: "If I could do fully what I try to do, it is only necessary for me to explain it, to enable the simplest man to do it afterwards. . . . Whatever he picks up from his text-books, and wishes to teach the children, should be so simple that every mother, and later every teacher, even those with the slightest ability for instruction, can follow, repeat, explain, and combine into a whole. . . . I saw a universal psychological method developed, by which all parents who were inclined to do so, might be put in a position to instruct their own children, and thereby obviate the supposed need of training teachers, for a long period, in expensive institutions and by educational libraries."

Simultaneous Oral Work. Pestalozzi's own view of this is clear and definite. He began it at Stanz; when, without any experience, training, or skill in the art of teaching, he first dealt with a group of children under school conditions. He says: "I stood in the midst of

these children, pronouncing various sounds and asking them to imitate me; whoever saw it was struck with the effect. It is true it was a meteor which vanishes in the air as soon as it appears. No one understood its nature. I did not understand it myself. It was the result of a simple feeling, or rather of a fact of human nature which was revealed to my feelings, but of which I was far from having a clear consciousness" (Letter about Stanz). This seems to imply that—however ignorant and unprepared—the immediate reaction of the mind, to the influence of a set of difficult circumstances demanding instant solution, is likely to be fundamentally right.

He again refers, in *How Gertrude Teaches*, to his experiences at Stanz, and says: "Being obliged to instruct the children by myself, without any assistance, I learned the art of teaching a great number together; and as I had no other means of bringing the instruction before them, than that of pronouncing everything to them loudly and distinctly, I was naturally led to the idea of making them draw, write, or work, at the same time. The confusion of so many voices, repeating my words, suggested the necessity of keeping time in our exercises, and I soon found that this contributed materially to make their impressions stronger and more distinct."

In his *Guide for Teaching Spelling and Reading*, he says: "A great advantage is to be gained for the instruction of a large number of children in public schools, by accustoming them, from the very beginning, to pronounce simultaneously whatsoever sound may have been repeated or pointed out to them by the teachers, so that all their voices together shall produce but one sound. By doing this in a stated measure [*i.e.*, sing-

song], a large class is carried on with the same ease as a single pupil, and the effect produced upon the senses of the children is far more powerful."

At the same time Pestalozzi appears to have had in mind a definite limitation of such work. In speaking of Krüsi's learning of his theories and methods, at Burgdorf, he says: "The sentences, descriptive of walking, standing, lying, singing, etc., which I gave the children to learn, led Krüsi to see the connection between the beginnings of my instruction and the purpose at which I was aiming, *viz.*, to produce a general clearness in the mind on all subjects. He soon felt that if the children are made to describe in this manner things which are so clear to them that experience cannot render them any clearer, they must thereby be checked in the presumption of describing things of which they have no knowledge; and at the same time they must acquire the power of describing whatever they do know, to a degree which will enable them to give concise, definite and comprehensive descriptions of whatever falls under their observation" (*How Gertrude Teaches*).

M. Soyaux refers to the simultaneous method in his account of his visit to Yverdon. He says: "They do not answer one at a time, according as they are able or not, but all who can answer call out together. This may have its advantages; but the shouting, in which the children take great delight, ought not to be permitted. I have sometimes actually been driven out of the room by the deafening noise which was made when several classes recited at the same time. The severe exhaustion which follows is certainly not good for the voice: the ear gets used to loud noises, and in the end the boy gets into the habit of shouting at all times."

Mutual Instruction. From the very first Pestalozzi appears to have believed in the instruction of children by children, although he seems very clearly to realise that limitations are necessary. Thus, in speaking of Gertrude's children, he says: "All that they learnt they knew so thoroughly that they were able to teach it to others; and they often asked to be allowed to teach younger children—this they were allowed to do. Thus one would see a boy with each arm around the neck of a smaller boy, while he made them say, after him, the syllables from the A B C book; or a girl would place herself and her wheel between two of the younger girls and teach them, with the greatest patience, the words of a hymn" (*Leonard and Gertrude*).

When he was at Stanz, he put into practice his plan of mutual instruction. "The number and inequality of my children rendered my task easier. Just as in a family the eldest and cleverest child readily shows what he knows to his younger brothers and sisters, and feels proud and happy to be able to take his mother's place for a moment, so my children were delighted when they knew something they could teach others. A sentiment of honour awoke in them, and they learned twice as well by making the younger ones repeat their work. In this way I soon had helpers and collaborators amongst the children themselves.

"When I was teaching them to spell difficult words by heart, I used to allow any child who succeeded in saying one properly to teach it to the others. These child-helpers, whom I had formed from the very outset, and who had followed my method step by step, were certainly much more useful to me than any regular schoolmaster could have been. I myself learned with the children. . . .

“Children became the teachers of children. They endeavoured to carry into effect what I proposed, and in doing so they themselves frequently traced the means of execution. . . . To this also I was brought chiefly by necessity. Seeing that I had no assistant-teachers, I placed a child of superior capacities between two of inferior powers. He threw his arms round their necks; he taught them what he knew, and they learned from him what they knew not. They sat by the side of each other with heart-felt affection. Joy and love animated their souls; the life which was awakened within them, and which had taken hold of their minds, carried both teachers and learners forward with a rapidity and cheerfulness which this process of mutual enlivening alone could produce.” Pestalozzi had expected to have proper assistants. In a letter to Dr. Rengger he writes: “I am waiting impatiently for letters from Zurich on the subject of the assistants of both sexes of whom I stand in need”.

Staff Conferences, etc. In the report by the Commissioners who inspected the institute at Yverdon an account is given of its government. “Each department of instruction has a certain number of professors, every one of whom takes a certain part of the work, and takes up the thread where his predecessor dropped it. These professors form a special committee, which meets once a week for an interchange of experiences and opinions which have resulted from their teaching, so that all may benefit thereby, and the teaching as a whole profit. Besides the teaching department there are two others: one for discipline and the other for religion. The masters in charge of the one collect the reports of the masters who have done supervision

duty, and decide on the question of the breaking of rules. The masters responsible for the other, which is considered higher and more important, watch over the moral and religious conduct of the pupils; and they take into consideration the characters of the pupils, their vices and bad habits, and the means to prevent or remove these.

“Pestalozzi is present at the meetings of these committees, and is the guiding spirit and soul of them. At the end of each week there is a joint meeting, the resolutions of which have the force of law. There is no respect of persons at these meetings: each one has the influence which his knowledge, work, and the confidence with which he inspires his colleagues, gives him. Whoever has anything to bring forward, has the right to be heard. The head himself is so little jealous of the predominance which is due to him by right of his character, age and fame, that on ceremonious occasions, if he takes part in them at all, he deposes to one of his friends the duty of presiding over the assembly.

“The Board of Management has an office, the members of which have a heavy task. The work is twofold: one part literary and scientific; the other clerical, *i.e.*, the correspondence with pupils' parents. The latter keeps registers, in which detailed reports of the progress and character of each child are recorded, and extracts from these are afterwards sent home to the children's families. The literary side corresponds with foreign teachers and the public: edits the periodicals which are printed in Switzerland and Germany, and inserts articles in learned reviews. Pestalozzi presides over this extensive work and shares with his colleagues a task which he could not manage alone.”

Dr. Biber also gives us an account of the staff conferences. He says: "Every teacher in his turn was called upon to give an account of the manner in which he proceeded in his lessons, and of the children who were placed under his instruction, or his superintendence. He was encouraged in freely communicating his observations, stating his difficulties, and offering his suggestions; he had to expect from Pestalozzi and from his brother teachers nothing but cordial assent when he was in the right, and kind advice, or gentle reproof, when he was in the wrong. It was in these assemblies that the younger teachers learned, by the manner in which they themselves were treated by the elder members of the establishment, the difficult art of living on an equality with those that were in a certain sense their inferiors, without descending to a level with them, and of admitting them to a familiarity which bred no contempt.

"The remarks of each, together with the resolutions to which they led, were put down in a minute-book, which, while it formed the basis of an open and candid correspondence with the parents, served as a useful reference for any teacher who might wish for information on some particular branch of the method, or concerning some one or other of the pupils. The effect of these constant communications on every subject connected with their daily duties, could be no other than to produce a kind of unity of feeling, of thought and action among all the teachers of the establishment. They were not left to first impressions, to erroneous and prejudiced views; they could not for any length of time overrate or underrate the abilities, acquirements, or moral deserts of any of the children.

“The experience of one man threw light upon that of the other; one trait, one fact, explained the other; and much of the injustice of which a single teacher will often, though ever so unwillingly, become guilty, was prevented by the full picture which was drawn, by all in common, of the state of mind of each pupil; not to mention the rich store of general knowledge of human nature, which these conversations must have been the means of eliciting from, and impressing upon, the minds of all present.

“Another assembly of the teachers took place on Saturday evenings, for the purpose of collecting whatever observations might have been made by each, individually, during the course of the week, on matters of general discipline, order, etc. Defects in the management of the house, mistakes on the parts of teachers, and misdemeanours on the parts of pupils, were here brought under discussion. The result of these deliberations, likewise, were put on record, and in a general assembly of teachers and pupils, held on Sunday evenings, such points as referred to the past or future conduct of the latter, were introduced, and their attention directed towards the means of remedying existing evils, or of attaining any object that was found desirable.

“On all these occasions Pestalozzi's personal presence imparted life and interest to the whole; while such subjects as were not fit for public discussion, were settled by him in private interviews with the parties concerned. Every teacher had at all times free access to him, and he made a point of conferring with each of them separately from time to time, on the duties which devolved upon him, and the impediments by which his progress might be obstructed.”

Time-Table. At Burgdorf there was considerable freedom as to times and lessons, though there seems also to have been a standing arrangement which was observed unless the teacher felt inclined to do otherwise. That there was a definite time-table at Yverdon appears certain from the fact that Froebel in the account of his visit says: "I saw the whole training of a great educational institution, work upon a clear and firmly settled plan of teaching. I still possess the 'teaching-plan' of Pestalozzi's institution in use at that time.

"This teaching-plan contains, in my opinion, much that is excellent. . . . Excellent, I thought, was the contrivance of the so-called 'circulating classes' [wandernde classen]. In each subject the instruction was always taken at the same time throughout the entire establishment. Thus the subject for teaching was fixed for every class; but the pupils were scattered amongst the different classes according to their proficiency in the subject being taught, so that the entire school was redistributed in quite a distinct rearrangement for each subject.

"The advantage of this contrivance struck me as so obvious and so efficient that I have never since departed from it in my educational work, nor could I now bring myself to do so."

The hours for lessons, at Yverdon, were (1) from 6 till 7; (2) 8 till 12; (3) 1.30 till 4.30; and (4) 6 till 8. Five to seven minutes for recreation were allowed between every two hours, in the morning (8 till 12). The longer intervals for recreation were from 12 till 1, and from 4.30 till 5 (when fruit and bread were distributed).

School Punishments. In *Leonard and Gertrude* it is urged that strict order and punctuality must be observed

in school, for this would train for life. School must begin on the stroke of the clock, and no one must be allowed to come late. The children must come clean in person and clothing, and with their hair combed. The body must be kept erect when the child is standing, sitting, writing or working (spinning, etc.). The schoolroom must be perfectly clean: no broken windows: and no nails driven crookedly into the floor. Nothing must be thrown upon the floor: children must not eat during lessons: in getting up and sitting down they must not push against each other.

At the close of school those children who had done *well* during the day went up to the master and said: "God be with you!" He held out his hand and replied: "God be with you, my dear child!" Next went those who had only done *fairly well*, and to these he said only: "God be with you!" without giving them his hand. Those who had done *badly* had to leave the room without going up to the master, or receiving a word of farewell from him. Punishments were made to fit the crime: an idle child had to cut fire-wood, etc.; a forgetful child had to be messenger for several days; disobedient and impertinent children were not spoken to in public, for a number of days, but only in private after school; wickedness and lying were punished by the rod, and the culprit's name was entered in a special book, and not erased until real amendment had been shown. The master treated the children, otherwise, with all kindness: talked with them more than at any other time: and tried to help them to overcome their failings.

While it was necessary to be very strict, love should thus be used in conjunction with fear, for only so would

pupils learn to root out evil habits—which they never do of their own accord, but only under compulsion, and because of good training.

Among other ways of getting order this was used: “Silence, as an aid to application, is perhaps the great secret of such an institution [at Stanz]. I found it very useful to insist on silence when I was teaching, and also to pay particular attention to the attitude of my children. The result was that the moment I asked for silence, I could teach in quite a low voice. The children repeated my words altogether; and as there was no other sound, I was able to detect the slightest mistakes of pronunciation. It is true that this was not always so. Sometimes, whilst they repeated sentences after me, I would ask them, half in fun, to keep their eyes fixed on their middle fingers. It is hardly credible how useful simple things of this sort sometimes are as means to the very highest ends. . . .

“When the children were obdurate and churlish, then I was severe, and made use of corporal punishment. . . . My punishments never produced obstinacy; the children I had beaten were quite satisfied if a moment afterwards I gave them my hand and kissed them, and I could read in their eyes that the final effect of my blows was really joy. The following is a striking example of the effect this sort of punishment sometimes had. One day one of the children I liked best, taking advantage of my affection, unjustly threatened one of his companions. I was very indignant, and my hand did not spare him. He seemed at first almost broken-hearted, and cried bitterly for at least a quarter of an hour. When I had gone out, however, he got up, and

going to the boy he had ill-treated, begged his pardon, and thanked him for having spoken about his bad conduct. This was no comedy; the child had never seen anything like it before. . . .

“I knew no other order, method, or art, but that which resulted naturally from my children’s conviction of my love for them, nor did I care to know any other. Thus I subordinated the instruction of my children to a higher aim, which was to arouse and strengthen their best sentiments by the relations of every-day life as they existed between themselves and me.”

Pestalozzi’s views on corporal punishment were very clear and definite. In his *On the Idea of Elementary Education* he lays it down that it is quite a mistake to suppose that we can overcome the desires of the flesh by simply talking to children. Neither are we likely to be able always to bend the child’s will to our own view of what is best by mere words. Corporal punishment will, in the last resource, be found to be necessary. It is much more likely to be our weakness than our sense of delicacy which persuades us that it is coarse and repulsive to use blows. If we had confidence in our judgment of what was necessary and right, and in our love for the child in deciding this, we should not hesitate. Because we cannot trust our love for the child, or the child’s confidence in our love for him, when we use severe measures for his good, we think that our motives will be misunderstood. It requires a real strength of affection to chastise in love: it is weakness of love which causes us to shrink from needful severity.

In the same work, and when discussing the question of religious training, he says that it is good for the child, even at an early age, to fear eternal punishment

as he fears his mother's rod ; and this so that the fear of the lesser evil may help to save him from the greater. He uses this parable in support of his view : " If the mother sees her child on the banks of a stream, across which there is a dangerous plank, she says : ' Do not cross ! ' Should he try to cross, and thus be in danger of drowning, she rushes to the treacherous plank and, pale and trembling, snatches him from peril. Again she warns him, with urgent emphasis : ' Do not go on the plank, for you may drown yourself ! ' When she gets him in doors she shows him the rod, saying, ' If you go there again, I shall whip you ! ' If, nevertheless, he does again try to cross the plank, she whips him ; and then he never again ventures there, but still he loves his mother as before."

In *Leonard and Gertrude* a mother thus speaks to her child who has been gossiping, after repeated warnings not to do it : " ' You have been told, once for all, that you are not to talk of anything that is no business of yours ; but it is all in vain. There is no getting you out of this habit, except by severe means ; and the very first time that I catch you again in any such idle gossip, I shall take to the rod.'

" The tears burst from poor Betty's eyes when her mother mentioned the rod. The mother saw it and said to her : ' The greatest mischief, Betty, often arises out of idle gossip, and you must be cured of that fault '."

A want of thoroughness and carefulness in work, so far as the child was really capable of these, was regarded as a fault to be cured. " I always made the children learn perfectly even the least important things, and I never allowed them to lose ground ; a word once learnt, for instance, was never to be forgotten, and a letter

once well written never to be written badly again. I was very patient with all who were weak and slow, but very severe with those who did anything less well than they had done it before."

Ramsauer, describing his own experiences as a pupil at the institution in Burgdorf, says: "Although Pestalozzi at all times strictly prohibited his assistants from using any kind of corporal punishment, yet he by no means dispensed with it himself, but very often dealt out boxes on the ears right and left. But most of the scholars rendered his life very unhappy; so much so that I felt a real sympathy for him, and kept myself all the more quiet."

M. Soyaux, of Berlin, who visited the institute at Yverdon, says: "As to discipline, the guiding principle is to allow the greatest possible liberty to the children, only trying to prevent abuses. In no case does the restrictive side of a rule predominate. Masters and pupils are as easy and natural in their manner as the lonely mountain-dwellers. They know nothing of the refinements of polite society, of polished phrases, or of high etiquette. . . . While, however, enjoying complete liberty they keep within certain reasonable limits; obstinacy, bullying, quarrelsomeness, etc., are extremely unusual among them. . . . The masters never think of enforcing their authority by commands or reproofs. . . .

"The children are, indeed, under too little restraint. There are, in effect, hardly any rules at all. During lessons they sit or stand as they feel inclined, and wherever they choose. . . . Naturally, owing to their youthful vivacity, they are more like a mob of people pushing and shoving to get the best places rather than a class of pupils who desire to learn, among whom

there should be proper order, if such an end is to be gained."

De Guimps tells us that: "Three times a week the masters rendered an account to Pestalozzi of the pupils' work and behaviour. The latter were summoned by the old man, five or six at a time, to receive his exhortations or remonstrances. He would take them one by one into a corner of his room, and ask them in a low voice if they had something to tell him, or to ask him. He tried in this way to gain their confidence, to find out if they were happy, what pleased them, or what troubled them."

Pestalozzi trained his pupils, as far as was possible, in methods of self-government. He says: "I appealed to them in all matters that concerned the establishment. It was generally in the quiet evening hours that I appealed to their free judgment. When, for example, it was reported in the village that they had not enough to eat, I said to them, 'Tell me, my children, if you are not better fed than you were at home? . . . Do you lack anything that is really necessary? Do you think I could reasonably and justly do more for you?' . . . In the same way, when I heard that it was reported that I punished them too severely, I said to them: 'You know how I love you, my children; but tell me, would you like me to stop punishing you? Do you think that in any other way I can free you from your deeply rooted bad habits, or make you always mind what I say?' You were there, my friend [Gessner], and saw with your own eyes the sincere emotion with which they answered, 'We do not complain of your treatment. Would that we never deserved punishment; but when we do, we are willing to bear it.' . . .

“ I shall never forget the impression that my words produced, when in speaking of a certain disturbance that had taken place amongst them, I said, ‘ My children, it is the same with us as with every other household ; when the children are numerous, and each gives way to his bad habits, such disorder follows that even the weakest mother is obliged to be reasonable, and make them submit to what is just and right. And that is what I must do now. If you do not willingly assist in the maintenance of order, our establishment cannot go on, you will fall back into your former condition, and your misery—now that you have been accustomed to a good home, clean clothes, and regular food—will be greater than ever.’ ”

But Pestalozzi was not less clear and definite in the conviction that to do without corporal punishment is the better way, and the end for which to strive. In his letter about Stanz he says: “ The pedagogical principle which says we must win the hearts and minds of our children by words alone without having recourse to corporal punishment, is undoubtedly good, and to be applied under favourable conditions and circumstances. But with children with such widely different ages as mine ; children for the most part beggars ; and all full of deeply rooted faults ; a certain amount of corporal punishment was inevitable, especially as I was anxious to arrive surely, quickly, and by the simplest means, at obtaining an influence over them all, to the end that I might put them all on the right road.

“ I was compelled to punish them, but it would be a mistake to suppose that I thereby, in any way, lost the confidence of my pupils. It is not the rare and isolated actions that form the opinions and feelings of children,

but the impressions of every day and every hour. From such impressions they judge whether we are kindly disposed to them or not, and this decides their general attitude towards us."

Again he writes: "I have urged the supreme character of the motive of sympathy as the one that should early, and indeed principally, be employed in the management of children" (*On Infants' Education*).

CHAPTER XIV.

PESTALOZZI AS A PRACTICAL TEACHER.

To know something about the manner in which Pestalozzi himself taught is, to say the least of it, a very interesting matter to those who understand and believe in his great educational principles. But we must not expect to find in him the perfect pedagogue any more than the perfect pedagogist. M. Fischer, who knew him well, and loved him, said: "Pestalozzi understands that he is lacking in much positive knowledge and in practical skill in using his machinery".

First let us note Pestalozzi's own accounts of his actual work as a practical teacher. Writing of his work in the orphan-school at Stanz, he says: "I had Gedicke's reading-book, but it was of no more use to me than any other school-book; for I felt that, with all these children of such different ages, I had an admirable opportunity for carrying out my own views on early education. I was well aware, too, how impossible it would be to organise my teaching according to the ordinary system in use in the best schools. As a general rule I attached little importance to the study of words, even when explanations of the ideas they represented were given. I tried to connect study with manual labour, the school with the workshop, and make one thing of them. But I was the less able to do this as staff, material and

tools were all wanting. A short time only before the close of the establishment, a few children had begun to spin; and I saw clearly that, before any fusion could be effected, the two parts must be firmly established separately—study, that is, on the one hand, and labour on the other. . . .

“I made them spell by heart before teaching them their A B C, and the whole class could thus spell the hardest words without knowing their letters. It will be evident to everybody how great a call this made on their attention. I followed at first the order of words in Gedicke’s book, but I soon found it more useful to join the five vowels successively to the different consonants, and so form a well-graduated series of syllables leading from the simple to the compound. I had gone rapidly through the scraps of geography and natural history in Gedicke’s book. Before knowing their letters even, they could say properly the names of the different countries. In natural history they were very quick in corroborating what I taught them by their own personal observations on plants and animals.”

In describing his experiences at Burgdorf, he gives us a still farther insight into his practical methods. He writes: “I once more began crying my A B C from morning till night, following without any plan the empirical method interrupted at Stanz. I was indefatigable in putting syllables together and arranging them in a graduated series; I did the same for numbers; I filled whole note-books with them; I sought by every means to simplify the elements of reading and arithmetic, and by grouping them psychologically, enable the child to pass easily and surely from the first step to the second, from the second to the third, and so on. The pupils no

longer drew letters on their slates, but lines, curves, angles and squares.”

In *How Gertrude Teaches* Pestalozzi again refers to his experiences, and says: “Being obliged to instruct the children by myself, without any assistance, I learned the art of teaching a great number together; and as I had no other means of bringing the instruction before them, than that of pronouncing everything to them loudly and distinctly, I was naturally led to the idea of making them draw, write, or work, at the same time. The confusion of so many voices repeating my words suggested the necessity of keeping time in our exercises, and I soon found that this contributed materially to make their impressions stronger and more distinct.”

So far we have had Pestalozzi speaking about himself, now we will see what others say about him, on the same points. Baron de Guimps, in his biography of Pestalozzi, when giving an account of the work at Stanz—an account which, he asserts, is wholly based on official documents—says: “Visitors to the establishment often saw nothing but disorder and confusion, with an entire absence, as it seemed, of all serious instruction”. M. Zschokke, the Government Agent at Stanz during Pestalozzi’s time there, in his *History of the Memorable Facts of the Swiss Revolution*—published in 1804—says of the school, after Pestalozzi left it: “The orphans, however, were still carefully taught, and such matters as order and cleanliness, which had previously been neglected, received particular attention”. M. Buss, one of Pestalozzi’s first assistants, speaking of his first meeting with Pestalozzi, says: “The following morning I entered his school: and, at first, I confess I saw in it

nothing but apparent disorder, and an uncomfortable bustle”.

The fullest sketch of Pestalozzi's proceedings in class is given by his pupil Ramsauer. In reading this it should be remembered that the events happened when Ramsauer was about ten years of age and were described thirty-eight years later. At the same time it should not be forgotten that he was so long and so intimately connected with Pestalozzi and his work that he is not very likely to have exaggerated or misrepresented matters much. This is his account: “So far as ordinary school knowledge was concerned, neither I nor the other boys learned anything. But his zeal, love and unselfishness, combined with his painful and serious position, evident even to the children, made a most profound impression upon me, and won my child's heart, naturally disposed to be grateful, for ever. . . .

“It is impossible to draw a clear and complete picture of this school, but here are a few details. According to the ideas of Pestalozzi, all teaching was to start from three elements: language, number and form. He had no plan of studies and no order of lessons, and as he did not limit himself to any fixed time, he often followed the same subject for two or three hours together. We were about sixty boys and girls, from eight to fifteen years old. Our lessons lasted from eight till eleven in the morning, and from two till four in the afternoon. All the teaching was limited to drawing, arithmetic, and exercises in language. We neither read nor wrote; we had neither books nor copy-books; we learned nothing by heart.

“For drawing we were given neither models nor directions; only slates and red chalk, and while Pesta-

lozzi was making us repeat sentences on natural history as an exercise in language, we had to draw just what we liked. But we did not know what to draw. Some of us drew little men and women, others houses, others lines or arabesques, according to their fancy. Pestalozzi never looked at what we had drawn, or rather scribbled, but from the state of our clothes it was pretty evident that we had been using red chalk. For arithmetic we had little boards divided into squares, in which were dots that we had to count, add, subtract, multiply and divide. It was from this that Krüsi and Buss first took the idea of their 'table of units,' and afterwards of their 'table of fractions'. But as Pestalozzi did nothing but make us repeat these exercises one after another, without asking us any questions, this process, excellent as it was, never did us very much good.

"Our master never had the patience to go back, and, carried away by his excessive zeal, he paid little attention to each individual scholar. The language exercises were the best thing we had, especially those on the wall-paper of the schoolroom, which were real practices in sense-impression. We spent hours before this old and torn paper, occupied in examining the number, form, position and colour of the different designs, holes and rents, and expressing our ideas in more and more enlarged sentences. Thus he would ask: 'Boys, what do you see?' He never addressed the girls.

"*Answer.* 'A hole in the paper.'

"*Pestalozzi.* 'Very well, say after me: I see a hole in the paper. I see a long hole in the paper. Through the hole I see the wall. Through the long narrow hole I see the wall. I see figures on the paper. I see

black figures on the paper. I see a square yellow figure on the paper. By the side of the square yellow figure I see a round black one. The square figure is joined to the round figure by a large black stroke'—and so on.

“Of less utility were those exercises in language which he took from natural history, and in which we had to repeat after him, and at the same time to draw, as I have already mentioned. He would say: Amphibious animals: crawling amphibious animals; creeping amphibious animals. Monkeys: long-tailed monkeys; short-tailed monkeys—and so on.

“We did not understand a word of this, for not a word was explained, and it was all spoken in such a sing-song tone, and so rapidly and indistinctly, that it would have been a wonder if any one had understood anything from it; besides, Pestalozzi cried out so dreadfully loudly and so continuously, that he could not hear us repeat after him, the less so as he never waited for us when he had read out a sentence, but went on without intermission, and read off a whole page at once. What he thus read out was drawn up on a half-sheet of large-sized millboard, and our repetition consisted for the most part in saying the last word or syllable of each phrase, thus ‘monkeys—monkeys,’ or ‘keys—keys’. There was never any questioning or recapitulations.

“As Pestalozzi, in his zeal, did not take any notice of the time, we generally went on till eleven o'clock with whatever he had commenced at eight, and by ten o'clock he was always tired and hoarse. We knew when it was eleven by the noise of other school-children in the street, and then usually we all ran out, without asking permission. . . .

“ I must further say that in the first years of the Burgdorf institute, nothing like a systematic plan of lessons was followed, and that the whole life of the place was so simple and home-like, that in the half-hour's recreation which followed breakfast, Pestalozzi would often become so interested in the spirited games of the children in the playground as to allow them to go on undisturbed till ten o'clock. And on summer evenings, after bathing in the Emme, instead of beginning work again, we often stayed out till eight or nine o'clock looking for plants and minerals.”

The commission appointed by the “ Society of the Friends of Education ” to report on Pestalozzi's work at Burgdorf, mentions that singing and walking often took the place of the regular lessons. M. Stapfer states that Pestalozzi's personal neglect and his strange ways destroyed his authority so that he lost control of his pupils, and the prefect Schnell had to go to his assistance.

Raumer, speaking of his stay at Yverdon, says: “ I wanted to do any work for myself, I had to do it while standing at a writing-desk in the midst of the tumult of one of the classes ”.

Karl Ritter said: “ Pestalozzi himself is unable to apply his own method in any of the simplest subjects of instruction. He is quick in grasping principles, but is helpless in matters of detail; he possesses the faculty, however, of putting his views with such force and clearness that he has no difficulty in getting them carried out.” This is, however, a description of Pestalozzi at Yverdon, when, it must be remembered, he had given up actual teaching, and where most of the matter taught was on a very much higher level than he had himself ever attempted.

Krüsi thus describes Pestalozzi's manner in teaching :
“ He had, I was going to say, almost brazen lungs, and any one who had not such would have to abandon all idea of speaking, or rather shouting, incessantly as he did. Even if I had had such lungs myself, I should often have desired that he and his pupils, when reciting or answering in class, might have used more moderation and lowered their voices. . . . He endeavoured to teach two subjects to a class at the same time ; he tried in particular to combine exercises in speaking with free-hand drawing and writing.”

CHAPTER XV.

SOME CRITICISMS ON PESTALOZZI'S THEORIES.

THE intelligent student of the science of education who does not know more than Pestalozzi—and this chiefly because of what Pestalozzi's life and work have done for education—about some of the principles and practice of education has not yet mastered the outlines of his study. The advance in psychology—there was no psychology, in the modern sense, in Pestalozzi's time—alone has been so great that our knowledge of educational ways and means is very much in advance of what was possible in Pestalozzi's time; and the progress in practical methods has, in the case of the most intelligent educators, been very considerable. But while we reverently, but unflinchingly, sit in judgment on that to which no higher compliment can be paid than to feel that it merits our efforts to remove all that may obscure the pure light of its great truths, let us never forget that we do but brush the dust from the shoes of a master—one whose shoe-latchets we may not be worthy to unloose. After we have done this, let us, as it were, once more stand back and respectfully take a full view of the whole man; and then shall we again feel that we must "praise noble men and the fathers that begat us". The folly of the wise is often greater than the wisdom of others: and we are not holy because we can see faults in a saint.

Nor need we fear to undertake such a task in such a spirit, for men like Pestalozzi are not only worthy of this tribute from their disciples, but they themselves desire it. They are concerned to teach what is true, and to help their pupils to yet higher and fuller truths.

Thus Pestalozzi writes, in his *Swan's Song*: "And so I end my dying strain with the words with which I began it: Prove all things and hold fast that which is good! If anything better has ripened in you, add it in truth and love to what in truth and love I have endeavoured to give to you in these pages. . . . Such as it is, give it an attentive examination, and whenever you yourself light upon a truth which you think likely to benefit humanity, do what you can for it, not so much for my sake as for that of the end I have in view. I ask nothing better than to be put on one side, and replaced by others, in all matters that others understand better than I do; so that they may be enabled to serve mankind better than I have ever been able to do." He also speaks of himself as "a man who wishes that others may take up what he has commenced, and succeed where he may have failed" (*On Infants' Education*).

The Simultaneous Oral Method. Raumer had a discussion (at Yverdon) with Pestalozzi on this matter, in which he very acutely criticised the method. Pestalozzi had urged Raumer to teach mineralogy at the institute, and Raumer replied: "If I do so, I must entirely depart from the methods of instruction pursued in the institution. Why so?" asked Pestalozzi. According to that method, I replied, I should have to do nothing but hold up before the boys one specimen after another, to give the name of each, for example: 'That is chalk,' and thereupon to make the class repeat in

unison three times: 'That is chalk'. It was thought that in this way observation of actual objects and instruction in language were provided for at the same time.

"I endeavoured to explain that such a mode of instruction made a mere show, giving the children words before they had formed an idea of the images of the minerals; that moreover the process of perception and conception was only disturbed by the talking of the teacher and the repetition of the scholars, and was therefore best done in silence. On Pestalozzi's opposing this view, I asked him why children are born speechless, and do not begin to learn to speak until they are about three years old; why we should in vain hold a light before a child eight days old, and say 'light' three times, or even a hundred times, as the child would certainly not try to repeat the word; whether this was not an indication to us, from a higher hand, that time is necessary for the external perception of the senses to become internally appropriated, so that the word shall only come forth as the matured fruit of the inward conception, now fully formed. What I said about the silence of children struck Pestalozzi."

Dr. Biber also has a shrewd and suggestive criticism on this subject. He says that the use of simultaneous work in education "depends entirely on the stage of development which the children have attained. With such as have grown up in a condition almost savage, or worse than savage, and who are for the first time brought together under an influence intended for their improvement, the lowest degree of simultaneous action is calculated to arouse the soul from that selfish indolence in which it loves nothing, and observes nothing,

but self; and disturbs everything around it, not from a wish to do so, but from an exclusive tendency to follow self, and from an entire inattention to the fact that there exists anything but itself."

Without entering into details we may suggest some points which arise in the consideration of this method: (1) How far does it enable a few to lead, and all the others to follow mechanically—compare the case of members of a choir who cannot sing a simple tune directly from the score, but can manage quite difficult pieces when accompanied by piano, organ, or orchestra; (2) how far is the effect likely to be almost wholly aural, *i.e.*, the ear-memory is chiefly, if not wholly, cultivated; (3) how far is the sound, or the sentence, likely to be corrupted and misunderstood in the mixture of voices; (4) how far is the teacher likely to be able to tell whether an individual is really, partly, or wrongly doing what is expected; (5) how far is the method likely to discourage initiative, self-activity and self-dependence; (6) how far can a method which demands so much uniformity meet, to any reasonable extent, the diversity of quickness, intelligence, knowledge and ability which must exist even in the most homogeneous class; (7) how far are the possible, and actual, results of such a method—muscular-memory, nerve-memory, etc.—worth the time and trouble taken, in a system of true education; (8) would not these results be necessarily produced by the truly educational method, and, therefore, more surely and soundly; (9) how far does it interfere with, or prevent, the intuitive activity which Pestalozzi regards as the essential of all true education.

Mutual Instruction. Several references have already been made to the fact that Pestalozzi set children to

teach other children. Some used this as an argument in favour of Bell's and Lancaster's monitorial system. It is, however, clear that there is a great difference between the two, *e.g.*, Pestalozzi used one child to teach one other child—or two other children—whilst Bell and Lancaster used one child to teach a group of other children; and Pestalozzi made use of a child who had been developed by his teaching until it had an intelligent mastery of whatever it was allowed to show to others, whilst Bell and Lancaster simply drilled their monitors in certain matter and method, and then set them to drill groups of other children in the same matter and by the same method.

It is interesting to note what Pestalozzi and Dr. Bell thought of each other's system. In 1815 the latter visited the institute at Yverdon, and at the end of his visit remarked to the interpreter (Ackermann, a former pupil with Pestalozzi) who accompanied him: "In another twelve years mutual instruction will be adopted by the whole world, and Pestalozzi's method will be forgotten". A few days afterwards a casual visitor said to Pestalozzi: "It is you, sir, I believe, who invented mutual instruction?" "God forbid!" answered Pestalozzi.

We suggest the following points for consideration: (1) Will the brightest or the dullest children receive such instruction; (2) if the dullest, do they need the most, or least, skilful educator; (3) is even a bright child the best, or a good, agent for securing what Pestalozzi meant when he said, "I want to psychologise education"; (4) is telling (or showing) the same thing, in method and effect, as teaching; (5) does, or can, one child consciously realise, understand and diagnose the

weaknesses and difficulties of another child, and provide for and solve them educationally; and (6) are the possible, and actual, results of the method worth the time and trouble taken, in a system of true education. Is there any pertinence in the saying: "Can the blind lead the blind? shall they both not fall into the ditch?"

Number Teaching. It will be remembered that Pestalozzi proceeds to develop ideas of number by constantly adding one more to the commencing unit. On this Dr. Biber remarks: "Pestalozzi considers number only *seriatim*, and, therefore, considers all arithmetic as a mere enlargement or abridgment of the formula 'one and one are two'; overlooking altogether the important fact that this formula, which expresses the juxtaposition of two objects, presupposes in the mind the idea of two. In the same manner its enlargement in 'one and one and one are three,' presupposes the idea of three; for this simple reason that it is impossible to conceive the operation of putting together, without having an idea of that which is to be put together, no more than it is possible to conceive the operation of building without any idea of building materials.

"The origin of number must not be sought in the repetition of units; because without the previous idea of number, the idea of repetition could not exist. . . . Whence shall we obtain it? . . . The answer to this question is given in what may appropriately be termed the generic power of number, or the power of every number [*i.e.*, what is more than one] to produce out of itself an indefinite series of numbers."

This is somewhat obscure, but suggests a sound criticism on Pestalozzi's theory, *viz.*, that the basis of number is, in its earliest stages, what we may term a

collective-divisible idea, not an individual-multiple idea. As Professor James says: "Number seems to signify primarily the strokes of our attention in discriminating things. These strokes remain in the memory in groups, large or small, and the groups can be compared. The discrimination is, as we know, psychologically facilitated by the mobility of the thing as a total. But within each thing we discriminate parts; so that the number of the things which any one thing may be depends in the last instance on our way of taking it. A globe is one, if undivided; two, if composed of hemispheres. A sand-heap is one thing, or twenty thousand things, as we may choose to count it. We amuse ourselves by the counting of *mere* strokes, to form rhythms, and these we compare and name. Little by little in our minds the number-series is formed."

It is the group element of the idea which is, in the first instance—and always, for purposes of computation—the most important, and helpful, to the learner. The thorough grasp of what "three" is, as three, and the ready mental recognition of it as part of a larger group should be first secured. Its analysis into two and one: one and one and one, will, so to say, come of itself. Of course the intuition of numbers as groups cannot be carried very far, because of visual limitations; but after the collective-divisible phase is exhausted the collective-multiple idea can be employed, *i.e.*, a group of things in which two fours can be seen is eight, etc.

Language, form and number, as the fundamental elements in all intuitions, is a theory which is open to very serious criticisms. Whilst, no doubt, the application of these as channels of information, about such intuitions as admit of it, is very helpful; they cannot

be applied to all intuitions, and are not essential to many, *e.g.*, shades of sharpness and flatness in singing, etc. (no names), water (no shape), sweetness (no number). Yet Pestalozzi asserts "that all our knowledge arises out of number, form and words". Again, he says that "number, form and name are found universally in all objects". This is seriously wrong, for number and name are, so to say, attached to objects by ourselves, not found in them; whilst form only belongs to certain physical objects.

He is self-contradictory in some of his own statements on the matter. Though he rightly says that language "is the reflex of all the impressions which nature's entire domain has made on the human race"; he, nevertheless, goes on to claim for it that it is also the origin and source of knowledge: "I make use of it, and endeavour, by the guidance of its uttered sounds, to reproduce in the child the self-same impressions which, in the human race, have occasioned and formed these sounds. Great is the gift of language. It gives to the child in one moment what nature required thousands of years to give to man."

A sound cannot possibly do this. It can only recall those impressions which objects and experiences have made, and which have been voluntary (and arbitrarily) associated with certain sounds which we call names. We might have called a *horse* a *pimko*; and whatever sound we use as its name is only useful to recall the impressions which the animal (or its picture, etc.) has made upon us. A simple illustration of this will show what the facts are: suppose a child to read a list of the names of things in a miscellaneous collection in a museum, what impressions would be reproduced in him

by the names which he does not already know. In other words, the sound apart from its association does nothing; it is the habitual association of sound with percepts and concepts which is the active influence. All this is very clearly set out in what Pestalozzi says of definitions: "Whenever he [man] is left without the greatest clearness of observation of a natural object which has been defined to him, he only learns to play with words like so many counters, deceives himself, and places a blind belief in sounds which will convey to him no idea, nor give rise to any other thought, except just this, that he has uttered certain sounds". In other words, the only impressions reproduced by sounds, as such, are impressions already made by sounds, as such.

Yet, after all, Pestalozzi did a great service to education by insisting upon the importance and value of these points of view in the development of clear ideas and distinct notions; he was only wrong in the reasons he gave for his views. His own statement of the practical purpose of his use of these three points is significant. He says that he bases instruction upon them "in order to enable children: (1) to view every object which falls under their perception as a unit; that is to say, as distinct from all other objects with which it seems connected. (2) To make themselves acquainted with its form or outline, with its measure and its proportions. (3) To designate, as early as possible, by descriptive words and names, all the objects which have thus come to their knowledge. . . . This requires that the means by which those faculties [number, form and language] are developed and cultivated, should be brought to the utmost simplicity, and to perfect consistency and harmony with each other."

All this is admirable so far as it goes, and in cases in which it can be applied; though it does not justify the claims which Pestalozzi made for it. But, as he himself says: "my whole manner of life has given me no power, or inclination, quickly to work out bright and clear ideas on a subject, until, supported by facts it has a background in me that gives rise to some self-confidence. Therefore, to my grave I shall remain in a kind of fog about most of my views. . . . While I have done very little during my life to reach ideas that can be defined with philosophical certainty; nevertheless, I have, in my own way, found a few means to my end, which I should not have found by philosophical inquiries—such as I was capable of making—after clear ideas on my subject."

"**Discover everything.**" Ramsauer, speaking of Pestalozzi's relations with his staff, says: "Even in our pedagogics, he would not permit us to make use of the results of the experience of other times or other countries: we were to read nothing, but discover everything for ourselves. Hence the whole strength of the institute was always devoted to experiments."

Truttman observed the same attitude of mind in Pestalozzi, in connection with the work at Stanz. Describing what he considered the faults of organisation and method, he says: "I begged him even to go to Zurich, to study in detail the organisation of the poor-school in that town, with a view to imitating it, as far as possible in Stanz. He accordingly went, but I do not expect any satisfactory outcome from his visit, because his idea is to do everything for himself, without any plan, and without any assistance other than that given by the children themselves."

Now whilst for the student-beginner the discovery method of training is of the highest possible value, and an indispensable training ; its chief value later on is that it enables the learner to take real advantage of other men's work and to enter into their labours, without going through all the work they had to perform. But for men who were engaged in so difficult and delicate a task as that of educating the young, and who were themselves largely untrained and undisciplined, intellectually, to refuse to make use of existing means—if they could approve them—was, to say the least of it, unwise.

Not that there was much of which Pestalozzi could approve ; but the attitude of mind was, in itself, wrong ; and was likely to cause much waste of time and, perhaps, undue self-satisfaction. It will be remembered that Pestalozzi—so far did he carry this idea—several times boasts that he has not read a book for nearly thirty years. One instance will suffice to show the mistake of all this : Basedow had endeavoured to carry out, at his *Philanthropinum* school at Dessau, the principles of Rousseau's *Emile* ; and amidst much that was superficial and merely sensational, was doing some good work. A study of his work and writings would have taught something, of both positive and negative value, to the Pestalozzians.

Criticising this attitude, Raumer writes : “ Hence it came, as I have already said, that he committed so many mistakes usual with self-taught men. He wants the historical basis ; things which others had discovered long before appear to him to be quite new when thought of by himself or any one of his teachers. He also torments himself to invent things which had been invented and brought to perfection long before, and might have

been used by him, if he had only known of them. For example, how useful an acquaintance with the excellent Werner's treatment of the mineralogical characters of rocks would have been to him, especially in the definition of the ideas, observation, naming, description, etc.

"As a self-taught man, he every day collected heaps of stones in his walks. If he had been under the discipline of the Fribourg School, the observation of a single stone would have profited him more than large heaps of stones, laboriously brought together, could do, in the absence of such discipline.

"Self-taught men, I say, want the discipline of the school. It is not simply that, in the province of the intellectual, they often find only after long wanderings what they might easily have attained by a direct and beaten path: they want also the ethical discipline, which restrains us from running according to caprice after intellectual enjoyments, and wholesomely compels us to deny ourselves and follow the path indicated to us by the teacher.

"Many, it is true, fear that the oracular instinct of the self-taught might suffer from the school. But, if the school is of the right sort, this instinct, if genuine, will be strengthened by it; deep felt, dreamy and passive presentiments are transformed into sound, waking and active observation."

Anybody can teach. Pestalozzi's views on this point raises some very serious and important issues. Is all our modern zeal for technical education and training a mistake: is the man in the street, if he be told how, as capable as the well-trained expert who knows both the why and the how in a scientific and practical way: is the school as the teacher's book, or as the teacher: is

the final efficiency of the worker to be measured by the quality and power of his mind and character, or by those of the one who simply gives him instructions to be carried out: is the educator a machine minder or a mind maker? These are questions which must be settled in deciding such a point.

At the same time there are elements of truth even in the extremest view of the statement that any one can teach. In the first place, any one with ordinary intelligence and power can, by careful and thorough training, be made into an averagely good teacher. It is not necessary to be a "born teacher" to be a good practical teacher. The "born teacher"—to give the phrase real meaning—is one with at least a touch of genius for teaching, *i.e.*, he has exceptional native capacity and disposition for the work of teaching. Any one can play five-finger exercises on the piano satisfactorily, if he be not defective in mind or deformed of hand; but one must be born with exceptional powers of mind and hand to become a really first-rate pianist, —of the type of which such men as Paderewski are the supreme examples.

Further, it is true that, without any training whatever, an intelligent person can follow a course of action laid down by another, and that certain results will be obtained according as the course itself is sound, and the worker carries it out thoroughly and accurately. But even material machines go wrong, and the best of courses do not fit every possible circumstance. What can the person who does not understand the machinery, and knows nothing of the system except that he is to follow it as laid down, do when either the one or the other fails to keep to what is ordinarily expected of

them? If this be so of material machinery, how much more is it true of living and growing things, and especially of so complex and delicate a living organism as the human being?

Again, it is even true that the exceptionally intelligent, observant and thoughtful persons will rediscover the principles of education, and do much work that is valuable and lasting. But at what cost of mistakes, and permanent and serious injuries? So far as such a one relies upon himself he is practically certain to commit most of the mistakes which have been made by the human race in its efforts to work out the best system of education. Why should this be done? What should we say of the man who turned his back on all existing medical knowledge, and the opportunities for medical training, so that he might rediscover the truths and principles of the healing arts while practising on his patients?

Of what a genius—the rarest of exceptions—can do, and can not do, without training, we can see in the case of Pestalozzi himself. Pestalozzi says: “I could neither write, sum, nor read perfectly. . . . [But] I could teach writing without being able to write perfectly myself.” M. Buss says of Pestalozzi: “He could, unfortunately, neither write nor draw well, though he had brought his children, in some, to me, inconceivable manner well on in both these subjects”. Karl Ritter, the great geographer, pays this high tribute to Pestalozzi’s teaching (or, should we say, inspiration): “Pestalozzi knew less geography than a child in one of our primary schools; yet it was from him that I obtained my chief ideas on this science, for it was in listening to him that I first conceived the idea of the

natural method. It was he who opened up the way to me, and I take pleasure in attributing entirely to him whatever value my work may have."

M. Charles Monnard says that Pestalozzi, when he went to Burgdorf to teach, "would have had no chance whatever against even the most ordinary candidates [for a post as teacher]. He had everything against him: thick, indistinct speech, bad writing, ignorance of drawing, scorn of grammatical learning. He had studied various branches of natural history, but had paid no particular attention either to classification or nomenclature. He was acquainted with the ordinary numerical calculations, but he would have found it difficult to work out a really long sum in multiplication or division, and had probably never attempted to solve a problem in geometry. For years he had done no study, only dreamed. He could not even sing, though, when greatly excited or elated, he would hum to himself snatches of poetry; not, however, with very much tune."

What Pestalozzi did, in spite of all these drawbacks, he did because he was the genius that he was, and not because he had received no special training and preparation for his work. The roughest diamond is a diamond still; but the cut and polished stone is the best both for work and as art. When ordinary stones claim to be as diamonds, both danger and disaster will result.

Other points of view in considering this question may be suggested, *viz.*, the efficiency of doctors as compared with that of trained nurses in dealing with the body: the efficiency of the trained nurse as compared with that of the parent, in carrying out a doctor's orders: the efficiency of the trained artisan as compared with that

of the man in the street, in ordinary affairs : the difference between learning, and observing how we learn : the difference between seeing that there is a difficulty, and in recognising in what the difficulty consists : and the difference between recognising the elements which make the difficulty, and knowing the best method of overcoming it.

CHAPTER XVI.

WHAT PESTALOZZI DID FOR EDUCATION.

PESTALOZZI himself declares what he sought to accomplish, *viz.*, (1) in the theory of education: "I want to psychologise instruction"; (2) in the art of education: "The public common school coach, throughout Europe, must not simply be better horsed: what it needs most of all is that it should be turned completely round, and brought on to an entirely new road". And this as a stepping-stone to the general good, through the advancement of the welfare of the working classes. As he himself says, in writing of the effect of Rousseau's works on his mind, he desired an "extended sphere of activity, in which [he] might promote the welfare and happiness of the people"; and again, in his letter to Anna Schulthess: "I shall not forget the precepts of Menalk, and my first resolutions to devote myself wholly to my country; I shall never, from fear of man, refrain from speaking, when I see that the good of my country calls upon me to speak; my whole heart is my country's; I will risk all to alleviate the need and misery of my fellow-countrymen".

As to his success Raumer says: "He compelled the scholastic world to revise the whole of their task, to reflect on the nature and destiny of man, as also on the proper way of leading him from his youth towards his

destiny. And this was done, not in the superficial rationalistic manner of Basedow and his school, but so profoundly that even a man like Fichte anticipated very great things from it." Professor Joseph Payne declares that Pestalozzi "stands forth among educational reformers as the man whose influence on education is wider, deeper, more penetrating than that of all the rest—the prophet and the sovereign of the domain in which he lived and laboured".

Fichte said: "Pestalozzi's essential aim has been to raise the lower classes, and clear away all differences between them and the educated classes. It is not only popular education that is thus realised, but national education. Pestalozzi's system is powerful enough to help nations, and the whole human race, to rise from the miserable state in which they have been wallowing." Herbart writes: "The welfare of the people is Pestalozzi's aim—the welfare of the common, crude population. He desired to take care of those of whom fewest do take care. He did not seek the crown of merit in your mansions, but in your hovels."

Of Pestalozzi's work Herbart says: "The whole field of actual and possible sense-perception is open to the Pestalozzian method; its movements in it will grow constantly freer and larger. Its peculiar merit consists in having laid hold more boldly and more zealously than any former method of the duty of building up the child's mind; of constructing in it a definite experience in the light of clear sense-perception; not acting as if the child had already an experience, but taking care that it gets one; by not chatting with him as though in him, as in the adult, there was already a need for communicating and elaborating his acquisitions; but,

in the very first place, giving him that which later on can be, and is to be, discussed.

“The Pestalozzian method, therefore, is by no means qualified to crowd out any other method, but to prepare the way for it. It takes the earliest age that is at all capable of receiving instruction. It treats it with the seriousness and simplicity which are appropriate where the very first raw materials are to be procured.”

Professor A. Pinloche, in the introduction to his book on *Pestalozzi*, says: “For Pestalozzi was reserved the undying fame of having not only restored to credit the processes of the method of *sense-perception*, already known and applied, but, above all, of having realised both the social importance of the education of the people and the most suitable means of determining its method”. He also speaks of Pestalozzi’s “original and powerful pedagogy”.

Mr. Thomas Davidson, in *A History of Education*, says: “Pestalozzi is the parent of the modern love for children, and it is this love that has transformed education from a harsh, repressive discipline into a tender, thoughtful guidance. . . . After Pestalozzi people saw children with new eyes, invested them with new interest, and felt the importance of placing them in a true relation to the world of nature and culture. It is not too much to say that all modern education breathes the spirit of Pestalozzi. It is education for freedom, not for subordination.”

Dr. Diesterweg, a great German educationist, thus sums up the changes brought about by Pestalozzi: “Instead of brutal, staring stupidity, close and tense attention; for dull and blockish eyes, cheerful and pleased looks; for crooked back, the natural erectness

of figure; for dumbness or silence, joyous pleasure in speaking, and promptitude that even takes the word out of another's mouth; for excessive verbosity in the teacher, and consequent stupidity in the scholar, a dialogic, or, at least, a dialogic-conversational method; for government by the stick, a reasonable and therefore a serious and strict discipline; for mere external doctrines and external discipline, a mental training, in which every doctrine is a discipline also; instead of government by force, and a consequent fear of the school and its pedant, love of school, and respect for the teacher".

W. C. Woodbridge, in the *Annals of Education*, says: "He combated with unshrinking boldness and untiring perseverance, through a long life, the prejudices and abuses of the age in reference to education, both by his example and by his numerous publications. He attacked with great vigour, and no small degree of success, that favourite maxim of bigotry and tyranny, that obedience and devotion are the legitimate offspring of ignorance. . . . In this way he produced an impulse which pervaded Europe and which, by means of his popular and theoretical works, reached the cottages of the poor and the palaces of the great."

To sum up briefly what Pestalozzi accomplished, we may say that he democratised education: he psychologised it: he revolutionised teaching methods: he showed the way to research and experimental work in education: and introduced child-study. He taught us that not only must the teacher know the child as a living and growing organism, but he must acquire the art of becoming as a little child so that he may influence, in the surest and best ways, the child's development. Like Froebel he said, in effect: "Come, let us live with our children".

That is to say, the teacher must adopt the standpoint of a child, as a well-graced actor dons the character which he impersonates. This must be done without exaggeration, fuss, or affectation; and without losing the control which wisdom, affection and authority should give. The teacher's mind should be so saturated with the realisation of the child's view of things that he unconsciously—in a great measure—works in a child-like (not childish) manner.

Above all, Pestalozzi is the one who first tried to analyse and systematise the very elements of the science of education. He dealt with the first beginnings, the real origins, of educational development. As Herbart says: "The Pestalozzian method . . . takes care of the earliest age that is at all capable of receiving instruction. It treats it with the seriousness and simplicity which are appropriate where the very first raw materials are to be procured." Herein Pestalozzi was the father of infants' education, in the modern sense; and his great disciple Froebel—himself in turn a Master—was truly an expounder and expander of Pestalozzian principles. Although Pestalozzi only sometimes dealt with those who were infants as to their bodies, he (personally) nearly always dealt with those who were infants as to their minds. It was of these that he was always thinking, and it was with them that he was so extraordinarily successful, as a practical teacher.

Perhaps the greatest success that Pestalozzi had was his influence upon two such men as Froebel and Herbart. Froebel says: "It soon became evident to me that Pestalozzi was to be the watchword of my life". Herbart wrote several essays on Pestalozzi's *A B C of*

Sense-Perception, and himself wrote a treatise on the same subject. Through these two men Pestalozzi has, in a special sense and degree, influenced all modern education. Indeed it is not too much to say that, in relation to modern education, Pestalozzi began everything, though he finished nothing.

During Pestalozzi's lifetime his system was introduced into most of the European countries: Alexander Boniface, for a time teacher of French at Yverdon, established a Pestalozzian school in Paris. Blochmann, teacher of music and geography at Yverdon, became chief educational counsellor to the King of Saxony; Gruner, who visited Yverdon, was head of a Pestalozzian school at Frankfort (where Froebel first taught); Muller, who was sent to Burgdorf to study the system, opened a Pestalozzian school at Mainz; Plamann, a visitor at Burgdorf, conducted a Pestalozzian school at Berlin; Barraud, who learnt under Pestalozzi, conducted a school at Bergerac; Voitel of Soleure founded a school at Madrid, and a training college for teachers at Santander; Ström and Torlitz, two teachers sent by the King of Denmark to study the system at Burgdorf, were put in charge of a school in Copenhagen; one teacher went to St. Petersburg. The King of Holland sent two student-teachers to Yverdon; and the Crown Prince himself visited the institution. Many young men from all parts, more especially from Germany, went to the institute as visitors, to study the system.

Our own country also came under the influence of Pestalozzi. Dr. Kay based much of the teaching and organisation of the Battersea Training College (founded 1840) on the principles of Pestalozzi and Fellenberg. When he (Dr. Kay) became secretary of the Education

Department, he tried to spread a knowledge of Pestalozzian method amongst teachers in London, but met with little success. He introduced the *Tables of the Relations of Numbers*; and in 1855 a translation by Mr. J. Tilleard of Raumer's *Life and System of Pestalozzi* was included in the books given "By grant from the Committee of Council on Education". This translation had already appeared in the *Educational Expositor*. Previous to this the Irish Commissioners for Education had published an edition of a manual of exercises in arithmetic, according to Pestalozzian methods, for the use of their teachers; and had introduced the methods into the Dublin Model Schools. M. Du Puget, a student-teacher at Yverdon, was teaching arithmetic on the principles of Pestalozzi at a school at Abbeyleix, in Ireland, in 1821.

The Home and Colonial Infant School Society (the original name), which opened its schools and training college on 1st June, 1863, was founded for the purpose of furthering Pestalozzi's ideas. In the "sketch of the course that is contemplated" we find it stated that "number and form will occupy, as they always do in a Pestalozzian school, a prominent place. . . . There will be two courses of drawing—first, using it as a means of developing invention, ingenuity and taste; second, using it as an imitative art. In singing it is hoped to carry out the beautiful system of Naegeli, which begins at the very commencement; and by its elementary exercises cultivates both the ear and voice before singing is practised." Hermann Krüsi, the son of Pestalozzi's assistant, taught arithmetic and drawing in the institution. Charles Reiner, also one of Pestalozzi's assistants, was at one time a member of the staff.

Closely connected with the work of this society were Rev. Charles Mayo, LL.D., and his sister, Miss Elizabeth Mayo, two enthusiastic educationists to whom England probably owes more for the benefits of Pestalozzi's principles than to any other two persons. They jointly wrote *Observations on the Establishment and Direction of Infants' Schools*, and *Pestalozzi and His Principles*, the first editions of which were published in 1827 and 1828 respectively.

Dr. Mayo—having heard through Mr. Synge of Glanmore Castle, County Wickford, of Pestalozzi's principles of education—went to Yverdon in July, 1819, and stayed nearly three years with Pestalozzi; during which time they got to know and esteem each other so well that “[he] loved Pestalozzi as a father and was himself loved as a son” (Miss Mayo, *Pestalozzi and His Principles*). How highly Pestalozzi thought of Dr. Mayo will be seen from the testimonial which he gave him when he left the institute.

“I the undersigned certify by these lines, in testimony of my esteem and of my sincere acknowledgments, that the Rev. Charles Mayo has lived for three years in my house, and has taken charge, during that time, of divine service, and given lessons in religion, and has been the director of the English pupils in my establishment, in all religious, moral and scientific subjects; and that in this capacity he has co-operated with much good-will and sagacity, and with a success full of blessings, in the aim of the efforts of my life, to their fullest extent. Viewing our proceedings without prejudice, he has distinguished himself as much by his serenity as by the active part he has taken. By reason of this he has attained to a very exact and pro-

found knowledge of the tendency of our efforts. Also he has grasped the principles and the particular methods, and their qualifications, which are peculiar to our system of education and manner of instruction.

“For some time I have found him to be a sensible man, sedate and benevolent, in the affairs of my own house; and I am convinced that, as his stay in our house has been for him and for me a great gain, he will—by reason of his ripe knowledge of the aim of our efforts, and of his positive conviction of the important and essential advantages of a part of these efforts—exert a very great influence in his own country; which being in the habit of welcoming everything that it recognises to be for good, will extend the same generosity in favour of our views. His noble heart nourishes this scheme, true to nature as it is, with as much zeal as his mind understands the means of carrying it out in all its purity, all its depth, and all its extent.

“May God be with you, my very dear friend! My sincere gratitude, my deep affection, is with you. My fervent desire is to see you once more during my life, and to nourish once more, with you by my side, those hopes the accomplishment of which is scarcely possible until after my death. May my good wishes accompany you and bring you happily to your own country and to the arms of your mother, whom you love with tender and filial affection.

“PESTALOZZI.

“YVERDON, 8th April, 1822.”

On his return to England in April, 1822, he made arrangements for opening a school, to be conducted on Pestalozzian principles, for the children of the upper classes. This was established at Epsom, and com-

menced in August, 1822. So great was its success that it had to be removed to larger premises, and was taken to Cheam after the midsummer holidays, 1826. Here the school became very famous, and many of the foremost men of the next generation received their early education within its walls. Miss Mayo had, at her brother's request, been preparing herself for several years to assist him in school-work, and was his right hand both at Epsom and Cheam.

Perhaps the greatest good they did for English education generally was to demonstrate the value and importance of object lessons in school work, and to organise them on Pestalozzian principles and practical lines. To Miss Mayo belongs the chief credit of this. She wrote several excellent little manuals for teachers, *viz.*, (1) *Lessons on Objects* (1830), which passed through twenty-six editions, was translated into Spanish, and also published in America; (2) *Lessons on Shells* (1831); (3) *Model Lessons for Infants' School Teachers and Nursery Governesses* (1838); and others, which proved of the greatest service in spreading sounder views of educational methods.

In the preface to the fourteenth edition (1855) of *Lessons on Objects* Miss Mayo remarks: "When this work was first presented to the public, nearly thirty years since, the idea of systematically using the material world as one of the means of educating the minds of children was so novel and so untried a thing in England, that the title, *Lessons on Objects*, excited many a smile, and the success of the little volume was deemed to be, at best, very dubious. The plain sound sense of the plan, however, soon recommended it to our teachers, and they discovered that reading, writing

and arithmetic do not form the sole basis of elementary education, but that the objects and actions of every-day life should have a very prominent place in their programme."

Miss Mayo was very closely connected with the founding and the working of the Home and Colonial Infant School Society. Mr. John Stuckey Reynolds, of Hampstead, desiring to devote his life to philanthropic effort, and hearing of Miss Mayo's knowledge of Pestalozzianism, called on her and invited her to supervise the teaching in a training college with practising schools, while he undertook the financial arrangements. She agreed to do this, and for over twenty years was the guiding spirit of the institution.

Such are some of the more immediate outcomes of Pestalozzi's work. Of the full and final result of his life and ideas no man can form a just estimate; but certain it is that the world is the richer, and mankind the happier because of them. It is given to but few men to do world-work, but Pestalozzi was one of these; though the world at large has not yet fully understood and realised what he has done for it. When it does it is not too much to say that his ideas will never be entirely fulfilled, so true and deep are they. Improved they should, and must, be; exhausted they can never be, in that they are true to the innermost core of man's nature.

Of this great and good man we may say, in the eloquent words of De Guimps, as true to-day as when he wrote them more than twenty years ago: "He died at his work, this noble friend of the poor; and, dying, he addressed a supreme appeal to those who might do more and better than he had done, and continue after

him the work that he had the sorrow of leaving unfinished. In his humble modesty he seems to have forgotten that it was he who had accomplished the hardest and most important task, by laying bare the vices of his time, discovering the principles of a salutary reform, and throwing a way open in which we have now but to walk.

“It is for the true and warm friends of humanity, those who, understanding Pestalozzi, feel themselves at one with him in spirit and heart, to answer his appeal, and follow him in the difficult path made easier by his devotion. To-day the gate stands wide open, and the need is pressing.”

SOME BOOKS FOR REFERENCE.

THE following five books are named because they are in English, and were written by men who knew Pestalozzi and his work. All except numbers 1 and 4 are out of print, but they are to be found in public and private libraries:—

1. *Life of Pestalozzi*, by Roger de Guimps. 2. *On Early Education*, letters to J. P. Greaves. 3. *Henry Pestalozzi*, by Dr. E. Biber. 4. *A B C of Sense-Perception*, by Herbart. 5. *Pestalozzi*, by Dr. and Miss Mayo.

Some other books: 1. *Esprit de la Méthode d'éducation de Pestalozzi*, by M. A. Jullien. 2. *Pestalozzi*, by J. Guillaume. 3. *Zur Biographie Pestalozzis*, by H. Morf. 4. *Pestalozzis Sammtliche Werke*, edited by Seyffarth. 5. *Pestalozzi and Swiss Pedagogy*, edited by Henry Barnard.

SOME SUGGESTIONS FOR FURTHER READING.

The relation of Pestalozzi's theories on the development of knowledge, ideas and language, and on the laws of thought, should be compared with those of the great thinkers who preceded him, *viz.*, Aristotle, Descartes, Hobbes, Locke, Leibnitz and Kant. Some idea of these may be obtained from the following:—

1. *Biographical History of Philosophy*, by G. H. Lewes. 2. *On Human Understanding*, by Locke. 3. *The Port-Royal Logic*, translated by T. S. Baynes. 4. *Laws of Thought*, by Thomson. 5. *Elementary Lessons in Logic*, by Jevons.

The relation of Pestalozzi's ideas on these subjects to those of to-day may be seen by the study of the *Manual of Psychology*, by G. F. Stout; *The Principles of Psychology*, by William James; *The Logical Bases of Education*, by J. Welton; *The Child's Mind*, by W. E. Urwick.

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